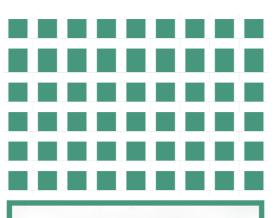
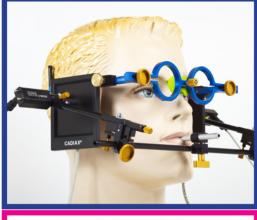
# 2012 Order Catalogue







Articulator Face-bow



Recording Cadiax



Diagnostics Documentation



Service Maintenance Training

retail prices valid from January 01,2012

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**Maintenance contract** 



Tel.: +43/2243/34140-0, www.gammmadental.com



## 1/1 Information about GAMMA

"Even if you are on the right track, you'll get run over if you just sit there!" (Lee lacocca)

or

"Today stagnation means regression"

(Rudolf von Bennigsen-Foerder)

Crisis or difficult times – currently these words can be heard daily and everywhere, and this influence seems to slow down quite a few people.

It is interesting that all quotes related to this issue were already mentioned decades ago, some even at the beginning of the last century. This shows that there had been showdowns already in former times and probably there will be critical times also in future.

We invest for the long term, because it is our strong conviction that future-oriented thinking and acting means an advantage not only for us but also for our customers – be it in the field of education or in the technical sector.

Today it has become an ablosute obligation for all of us to regularly update our state of knowledge, but finally it bears many pros, as for instance time saving in the daily work load, precision made easy and satisfied customer on the longterm.

Your GAMMA team



# 1/2 Information about GAMMA

## **GAMMA** – introducing the team

GAMMA is not only distinguishable by its ideas, products and services, but even more so by its team of enthusiastic co-workers. Cooperation among the individual areas of expertise is absolutely essential for the smooth functioning of our client-oriented concept.

According to the structure of the company each staff member has been allocated responsibilities and to make it easier for you to find immediately the right person in charge and to provide you with an overview of the corporate structure, we would like to introduce our team:

## Marketing, Sales



Brigitta Lauteren is responsible for the implementation of marketing activities, coordination of sales and realization of internal processes.

+43-2243-34140 Ext.: -17 <u>b.lauteren@gammadental.com</u>

## Production, Purchasing, Service, Sales:



Friedrich Engleithner is responsible for purchasing, production and service. His job is to guarantee the quality of the products delivered, and he is your competent contact partner for any technical questions related to the Reference system and CADIAX appliances.

+43 2243 34140 Ext.: -13 f.engleithner@gammadental.com

## Sales support, Accounting:



Doris Plener makes sure that everything runs smoothly, from the original order to delivery. She coordinates the communication within the company and processes incoming customer inquiries, making sure that they end up at the appropriate place.

+43 2243 34140 Ext.: - 12 <u>d.plener@gammadental.com</u>

## Sales Germany

Rainer Heitmüller is your contact person for sales in Germany. With his expert know-how he is the right person for all your questions.

+43 (0)2243 34140-0 r.heitmueller@gammadental.com



# 1/3 Information about GAMMA

## **Quality Control, Product Authorization, Development:**



Christian Schicho maintains our quality management system, ranging from all approvals for our products to the strict compliance with all normative requirements.

+43 2243 34140 Ext.: - 21

c.schicho@gammadental.com

## Software development:



Thomas Haberl coordinates the development of our software products.

He is our specialist for all issues related to the GAMMA Dental Software.

+43 (0)2243 34140 DW: - 10

t.haberl@gammadental.com

## Software, Hotline:



Michael Vavryn is your first contact for all issues regarding our products and the Gamma Dental Software®

He is in particular qualified to find the best solution to software questions of our customers.

+43 (0)2243 34140 DW: - 11 <u>m.vavryn@gammadental.com</u>



## 1/4 Information about GAMMA

## **Important Information**

Validity With the publication of this catalogue, all previously published catalogues

and pricelists become invalid.

**Product Information** The product information contained in this catalogue has been limited to

important characteristics and/or directions for use. Detailed descriptions

are available upon request.

This catalogue is not a substitute for the detailed descriptions and

directions which are included in the delivery packages.

**Order Information** If not otherwise indicated, the article numbers always refer to one (1) unit.

Any deviations from "1 unit" (e.g., package contents or sets, units, pair, 10

per package, etc.,) are marked accordingly.

Orders To be valid, all orders must be made in writing. Please always use the

GAMMA order form. To avoid incorrect deliveries, we recommend to always include the article number, the number of units and the description.

Transport Within Europe, all goods are sent by DPD Transport Company. Any other

means of transport, if desired must be indicated accordingly on the order

form.

Transport Costs Transport costs are borne by the buyer and will be automatically included

in the bill.

**Terms of delivery** Unless otherwise agreed, the term of delivery is 10 workdays after

reception of the written order. If the product is not available within this appointed time, the customer will be informed accordingly about the

expected date of delivery.

In case of collective (group) orders, GAMMA reserves the right to carry out

part-deliveries.

General Conditions Our general business conditions are valid for all business transactions

between GAMMA and its customers. This is especially applicable for all orders, deliveries, installations, billings and services performed. Any deviation from these business conditions must be in written form.

You will find the general business conditions for the GAMMA Medizinisch

Wissenschaftl. Fortbildungs-GmbH at the end of this catalogue.

Replacement Parts In this catalogue only those spare parts are listed for which, according to

our experience, there is a regular demand for replacement Please contact your GAMMA contact partner with any questions regarding other

replacement parts.

**Prices** All prices are listed in Euros, ex-warehouse Klosterneuburg. The applicable

sales taxes will be added to the bill. Prices for installation and training are

not included.

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registered trademarks of the GAMMA Co. Ltd.; ARTEX is the registered trademark of the Amann-Girrbach Dental Co.; DENAR & HANAU are trademarks of Whipmix; KAVO is a trademark of the KaVo Co.; WHIPMIX is a trademark of the Whipmix Co.; PANADENT is a trademark of the Panadent Co.; IVOCLAR & STRATOS are trademarks of the Ivoclar Co.;

SAM is a trademark of the SAM Praezisiontechnik Co.

January 2012



# 1/5 Information about GAMMA

## Suppliers, Partners and Dealers

GAMMA products are available throughout the world. The market for "occlusion products" is growing steadily, and we are constantly working to increase the number of competent partners for our products and ideas.

## Bezugsquellen, Partner und Händler

GAMMA Produkte können weltweit bei folgenden Vertriebspartner bezogen werden:

#### Austria:

## GAMMA Medizinisch-wissenschaftliche Fortbildungs-GmbH

Josef-Brennerstrasse 10 A-3400 Klosterneuburg Tel: +43-2243-34140-0 Fax: +43-2243-34140-90 eMail: office@gammadental.com Web: www.gammadental.com

### Germany:

## GAMMA Medizinisch-wissenschaftliche Fortbildungs-GmbH

Josef-Brennerstrasse 10 A-3400 Klosterneuburg Tel:: +43-2243-34140-0 Fax: +43-2243-34140-90 eMail: office@gammadental.com Web: www.gammadental.com

#### American Dental Systems GmbH

Johann-Sebastian-Bach-Straße 42 D-85591 Vaterstetten Tel: +49 (0)8106 300 300 Fax: +49 (0)8106 300 310 eMail: info@ADSystems.de Internet: www.ADSystems.de

## **United Kingdom:**

## **Prestige Dental**

7 Oxford Place . Bradford West Yorkshire BD3 0EF, UK Tel: +44-1274-721 567 Fax: +44-1274-304 237 eMail: info@prestige-dental.co.uk Internet: www.prestige-dental.co.uk

## Italy:

## DENTAG Italia S.R.L.

Bergwerkweg 9 / Via della Miniera 9 I-39018 Terlano (BZ) Tel: +39 0471 256233 Fax: +39 0471 256244 eMail: dentaq@dnet.it Internet: www.dentag-italia.com

## Poland:

## C.WITT i Spólka

ul. 'sw.Katarzyny 4/4 87-100 Torún, Polen Telefon: +48-609-929-691 Telefax: +48-56-655-01-26 Mobil: +48-602-344201 eMail: biuro@cwittdental.pl Internet: www.cwittdental.pl

#### **NATRODENT**

Profesjonalne Systemy Protetyczne ul.Wierzbowa 46/48 90-133 Lodz

90-133 Lodz Telefon: +48-42-675 74 76 od. 78 Telefax: +48-42-675 75 22 eMail: biuro@natrodent.pl

#### Russia:

#### I-Max Ltd.

V. N. Geraskov, General Director Nahimovskiy prospect, 52 / 27 office B 117292 Moskau, Russland eMail: <a href="mailto:mvp@maximum.su">mvp@maximum.su</a>

#### Ukraine:

#### **Implamax**

Yaroslaviv Val street, 26 lit A 01034 Kyiv Ukraine Telefon: 0038-044-501 22 14 eMail: sokhan@dental-azbuka.ru

#### Kazachstan:

## Azbuka

Pr. Abaya 155, office 16 050060 Almaty, Kazachstan Tel: +7-3272-952778/76 eMail: vera@dental-azbuka.ru

#### China

## Beijing Jia Lian Cheng Ye Medical

100039 Beijing, P.R. China Jade Flats, Room 423, Fu Xing Road Jia #38 Tel: +86-10-88 20 3990 Fax: +86-10-88 20 3991 eMail: <u>lixuejun@bjfocus.com</u>

#### Japan

## **HAKUSUI Trading Co., Ldt.**

1-15, Niitaka 1-Chome Yodogawa-Ku 532-0033 Osaka, Japan Tel: +81 (0)66 396 4400 Fax: +81 (0)66 396 4457 eMail: hakusui@hakusui-trading.co.jp Internet: www.hakusui-trading.co.jp

#### U.S.A.:

## **Whip Mix Corporation**

1730 East Prospect Road, Suite 101 CO 80525 Fort Collins USA Tel: 001-970 221 7051 Tollfree: 800-201-7286 Fax: 001-970-221-7003 (6075) Internet: www.whipmix.com



# 1/6 Information about GAMMA

## Up-to-date online information: WWW.GAMMADENTAL.COM

Through the Internet, Gamma offers continuous, current information regarding product innovations, new software versions, courses, exhibitions and other interesting topics.



In addition, the site offers technical information, technical support, and downloadable handbooks.

## Quality Management- management by and for the team

Gamma's quality management team determines the important procedures and processes of our company. We don't just issue dictates; permanent self-analysis and constant improvements in our products are always in the foreground of our cooperative efforts. Our most important goal:

We want to offer tools for functional dentistry, perfectly suited to your dental practice.





Quality management standard for manufacturers of medical products





European Union directives for medical products



# 2/1 Product overview

ARTICUL	ATOR:	
06-231380	Reference SL Articulator	1.177,00
Components a	and spare parts:	
06-231347	Centric locks with setting rings, white (pair) for Reference SL up to serial no. 06xxxx	126,50
06-231387	Centric locks white (pair) for Reference SL from serial no. 07xxxx	78,50
06-231388	distance ring (for Reference SL from serial no. 07xxxx)	47,50
06-231382	SL-centric O-rings, Ø 20mm / 2mm, red, (pair)	11,40
06-231303	SL-index pin	30,50
06-231383	SL retention magnet	10,20
06-231384	Magnet removal pin	10,80
06-231385	Reference SL posterior support pin (piece)	28,40
06-231911	Ball-shaped allen key, 3 mm	14,60
06-231912	Ball-shaped allen key, 2,5 mm	7,30
06-231308	SL Incisal pin unit	182,10
06-231307	SL Incisal pin	52,60
06-218180	SL Incisal pin micro-adjustable	131,10

PROGRA	M SET:	
06-231310	Program set SL 26 pieces in a color-coded, transparent box, including 4 SCI inserts and 4 TCI inserts and 5 protrusion stops	428,00
Components	and spare parts:	
06-231321	TCI - insert black	45,40
06-231322	TCI - insert white (standard equipment for articulator, not included in program set)	45,40
06-231323	TCI - insert yellow	45,40
06-231324	TCI - insert red	45,40
06-231325	TCI - insert blue	45,40
06-231331	SCI - insert white (standard equipment for articulator, not included in program set)	32,20
06-231332	SCI - insert yellow	32,20
06-231333	SCI - insert red	32,20
06-231334	SCI - insert blue	32,20
06-231335	SCI - insert black	32,20
06-231341	Protrusive Stop, yellow 1mm	35,90
06-231342	Protrusive Stop, red 2mm	35,90
06-231343	Protrusive Stop, blue 3mm	35,90
06-231344	Protrusive Stop, green 4mm	35,90
06-231345	Protrusive Stop, black 5mm	35,90
06-231340	Protrusive Stop Set 0,5/1,5/2,5mm (special part, not included in program set)	107,70

MOUNTI	NG PLATES & BLOCKS:		
06-231550	Mounting plates, (50/pkg), including nuts	76,70	
06-231551	Nuts, 50 pcs.	8,50	NA)
06-231510	Distance block, pair, horizontal 1 (standard)	16,70	20
06-231511	Distance block, pair, horizontal 2 (+8 mm)	18,10	-
06-231512	Distance block, pair, horizontal 3 (+16 mm)	19,20	
06-231520	Distance blocks, pair, slanted A (standard)	18,10	



All prices in Euro, VAT and shipment not included. Please use the GAMMA-order form at the end of the catalogue. Tel.: +43/2243/34140-0, Fax: +43/2243/34140-90, office@gammadental.com January 2012



# 2/2 Product overview

06-231521	Distance blocks, pair, slanted B (+8 mm)	19,20
06-231522	Distance blocks, pair, slanted C (+16mm)	20,30
06-231525	Distance blocks, Set (1 pair of each type)	111,40
06-231516	Lens head screw for distance block 1 and A (10pcs)	5,50
06-231517	Cylinder head screw for distance blocks 2,3,B,C (10pcs)	23,10
06-231518	Retention disc (10 pcs)	22,80



ADJUSTN	MENT PARTS:	
06-231900	Reference Calibration Key	395,00
06-231349	SL Adjustment Set 1 for Reference SL up to serial no. 06xxxx	109,30
06-231386	SL Adjustment Set 2 for Reference SL from serial no. 07xxxx	109,30
06-231349A	Articulator Axes with O-rings (pair)	53,60
06-231349H	Casings (pair)	29,10
05-001J	Adjustment for Reference SL articulator (device must be sent to the factory in Klosterneuburg – price excl. transport costs)	135,00



INCISAL 7	TABLE & FRONT TOOTH DIAGNOSTICS:		
06-231720	Standard incisal table flat	78,30	
06-231723	Standard incisal table 30 deg	81,50	~ ~ ~ *
06-231724	Standard incisal table 40 deg	81,50	COX 25 COX 3
06-231725	Standard incisal table 55 deg	81,50	
06-231721	Standard incisal table attachment flat	30,10	
06-231750	Anterior guidance unit with double pin for protrusion/laterotrusion	427,00	-21.0c
04-000004	Weber's 3D measuring template, for metric measuring of cusp coordinates directly in the Reference SL articulator	38,00	
04-000013	Sequential Incisal Table Set (inserts blue, orange, green)	607,00	T 4
Components a	and spare parts		Manager .
04-000013T	Base adapter	203,60	
04-000013B	Guidance blocks, 3-part, blue	172,60	
04-000013G	Guidance blocks, 3-part, green	172,60	-19
04-0000130	Guidance blocks, 3-part, orange	172,60	T
04-000013Y	Guidance blocks, 3-part yellow (optional part on request)	172,60	
06-231800	Anterior tooth shaper	229,00	

DIAGNOS	STIC EXTENTIONS:		
06-231850	Occlusal plane measuring unit	273,00	-
06-231350	CPM-SL, incl. marker pin (pair)	227,00	9
06-231351	CPM-SL marker pin	10,80	
06-231352	Reference Writing labels (8 sheets, each 25 labels)	34,40	
06-231353	Transparent protective foil	19,90	
06-230610	E-CPM upgrade for Cadiax compact 2	855,00	
06-230600	E-CPM electronic condylar position measurement, complete	4.590,00	11111 O
06-230750	CPV (Condylar-Position-Variator)	2.070,00	



# 2/3 Product overview

06-230620	A-CPM Upgrade Set mechanical	322,00	
	(digital measurement unit, mechanic flags, marker pin, allen key, writing labels)		7184
06-230630	Reference-CPM Set for condylar position measurement, incl. 06-230610 E-CPM + 06-230620 A-CPM Upgrade Set	1.177,00	
06-230631	Diagnostic notes condylar position measurement (60 sheets)	16,00	
06-230632	A-CPM writing labels (10 sheets each 12 labels)	16,00	0
04-000019	Curve of Spee Analyzer for SL-Articulator	311,00	The state of the s
	7 transparent plates with integrated curve radius in steps of 5mm from R60-R90 (pedestal not included)		
04-000050	Brux checker (10 foils)	40,00	
04-000055	Occlusogram wax green, (100 pcs) for use in dental laboratory	75,00	Mile
06-231999	System case for Reference course set	213,00	
06-230800	SL – SLA according R. Slama	price on request	Alle



Artex is a trademark of Amann Girrbach



# 2/4 Product overview

COURSE	EQUIPMENT REFERENCE AB:	
06-231000	Reference AB course equipment - set complete	4.852,00
	including:	
06-231999	system case for Reference AB course set	
06-231380	Reference SL articulator	
06-230430	Reference AB face bow	
06-230480	Face bow support for mounting	
06-230566	Mandible mounting clamp	
06-230570	pedestal support	
06-230585	Bitefork support	
06-231550	Mounting plates	
06-231525	Distance blocks (1 pair of each type)	
06-231310	Program set SL	
06-231350	CPM-SL incl. marker pin (pair)	
06-231352 06-231900	Reference writing labels Reference Calibration key	
06-231353	Transparent protective foil	
04-000013	Sequential Incisal Table Set	
06-231850	Occlusal plane measuring unit	
06-231800	Anterior tooth shaper	

0.4.0000000	Condula avanla Cata assentate	0.570.00
04-GCR009	Condylograph Set, complete transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau®, Whipmix articulator systems on request)	3.578,00
04-GCR011	Condylograph comfort Set, complete transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau®, Whipmix articulator systems on request)	3.578,00
04-GCR012	Condylograph comfort Set for Cadiax compact 2 transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau®, Whipmix articulator systems on request)	3.578,00
04-GCR014	Condylograph Set for Cadiax compact 2 transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau®, Whipmix articulator systems on request)	3.578,00
04-GCR010	Condylograph comfort face bow	1.177,00
04-GCR013	Extension set for Condylograph + for Condylograph <i>comfort</i> to enable working with Cadiax compact 2 using patient's individual axis	402,00
Components a	nd spare parts for the upper face-bow	
06-230292	Forehead-neck band for Condylograph, 5pcs/pkg.	33,80
06-230288	Retention straps for Condylograph <i>comfort</i> , 3pairs/pkg., version 1	24,70
06-230290	Retention straps for Condylograph comfort, version 2	24,70
06-230291	Reference headband for Condylograph comfort	24,70
06-230250	Bite fork support for Condylograph	206,80
06-230251	Bite fork support for Condylograph comfort	206,80
06-230252	Adapter for bite fork support Condylograph comfort	63,30
06-230260	Bite fork for Condylograph and Condylograph comfort	41,90
06-230240	3D joint support Condylograph (not included in set 04-GCR009)	330,00
06-230245	3D joint support Condylograph comfort (not included in set 04-GCR010 + 04-GCR011)	330,00



# 2/5 Product overview

06-217611	Bite fork, partial, 2 pieces (should only be purchased with 3D joint support, not included in 04-GCR009 or 04-GCR011 set)	34,70
06-235145	Axis indicator holder (pair)	251,00
06-230370	Axis needles and sockets (pair)	56,80
06-230155	Axis pins, long (pair)	36,50
06-230156	Axis pins, short (pair)	36,10
06-230110	Recording plates, red (pair) for Condylograph and Condylograph comfort	120,00
06-230111	Recording plates (flag) for Cadiax compact flag adapter (pair)	130,00
06-230270	Glabella support for Condylograph	52,60
06-230285	Reference point indicator for Condylograph	186,80
06-230286	Reference point indicator T fixed (22mm) for Condylograph <i>comfort</i>	159,70
06-230287	Reference point indicator P fixed (22mm) for Condylograph <i>comfort</i>	159,70
06-230284	Reference point indicator individual for Condylograph comfort	207,00
Components	and spare parts for the mandible face-bow	
06-235306	Mandible Face-bow, indiv. adjustable	515,00
06-231352	Reference Writing labels (8 sheets, each 25 labels)	34,40
06-230335	Occlusal tray clutch, large	68,20
06-230330	Occlusal tray clutch, small (standard)	68,20
06-230345	Functional occlusal clutches (5 pcs)	152,20
Components	and spare parts for articulator mounting	
06-230510	Upper jaw transfer stand Reference, incl. reference plane adjustment reed and distance ruler	510,00
06-230512	Upper jaw transfer stand SAM® incl. reference plane adjustment reed and distance ruler (Artex®, Denar®/Hanau®, Whipmix please inquire for availability)	661,00
06-230520	Reference plane adjustment reed: for 06-230510 (Reference)	27,60
06-230522	Reference plane adjustment reed: for 06-230512 (SAM®) (Artex®, Denar®/Hanau®, Whipmix please inquire for availability)	52,30
06-230530	Distance ruler	64,50
06-230570	Pedestal support	37,60
06-230566	Mandible Mounting clamp - for a stable free standing position of the articulator during LJ mounting	111,00

<sup>®</sup> SAM is a trademark of SAM Präzisionstechnik, Artex is a trademark Amann Girrbach, Denar & Hanau are trademarks of Whip Mix, KaVo is a trademark of KaVo, Whip Mix is a trademark of. WhipMix, Panadent is a trademark of Panadent, Ivoclar is a trademark of Ivoclar



# 2/6 Product overview

## CADIAX® compact 2:

01-10E200-2	CADIAX® compact 2 (incl. recording software, not including face-bow and upgrade set)	3.696,00
06-230430	Reference AB face-bow (incl. 3D joint support)	696,00
06-230451	Upgrade set for AB face-bow (mandible bow, clutch small, retention straps with pins)	408,00
01-10E300-2	CADIAX® compact 2 Basic-Set	4.800,00



Software: (prices for single user license)			
03-SOFTE000CC2	Recording software for CADIAX® compact 2	337,00	
03-SOFTE000C	Gamma Dental Software®: Version "C" database system with enhanced CADIAX® analyses	1.489,00	
03-SOFTE000CW	Gamma Dental Software®: Version "CW" like version "C", incl. additional possibilities for incisal table calculations for the articulator	1.918,00	
03-SOFTE000S	Gamma Dental Software®: Version "S" central diagnosis and planning module, incl. cephalometric program	1.929,00	
03-SOFTE000AM	Gamma Dental Software®: Version "AM" like version "CW" incl. cephalometric analysis program	4.275,00	
03-SOFTE000DB	GAMMA Document Browser base license	399,00	
01-10E300-2C	CADIAX® compact 2 basic system + Gamma Dental Software® Version "C"	6.289,00	
	Consisting of: 01-10E200-2 + 06-230430 + 06-230451 + 03-SOFTE000C +		



Replacement parts/accessories for CADIAX® compact 2			
01-SP0065	CADIAX compact 2 basic component	1.688,00	
06-230452	Upgrade set individual for AB face bow	849,00	
	consisting of 06-235306 mandible bow 06-230370 axis needles 01-SP0040 retention straps 06-230330 clutch small 06-231352 Reference writing labels 06-230111 recording plate		
04-GCR012	Condylograph comfort Set for Cadiax compact 2 transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau®, Whipmix articulator systems on request)	3.578,00	
04-GCR014	Condylograph comfort Set for Cadiax compact	3.578,00	
	Transfer stand for Reference Articulator (standard) (Artex®, SAM®, Denar®/Hanau®, Whipmix on request)		
04-GCR010	Condylograph comfort face bow	1.177,00	
06-235306	Mandible Face-bow, indiv. Adjustable	515,00	
06-230335	Occlusal tray clutch, large	68,20	
06-230330	Occlusal tray clutch, small (standard)	68,20	
06-230345	Functional occlusal clutches (5 pcs)	152,20	
06-230350	Mandibular clamp for LJ bow	114,80	
06-230444	Glabella cushion comfort (5 pcs.)	41,50	
06-230445	Glabella support comfort (incl. 3 pcs Glabella cushions comfort)	95,40	
04-000011	Bow stabilizer for AB upgrade set, arbitrary (pair)	155,40	
04-000012	Bow stabilizer for AB upgrade set, arbitrary GAMMA (pair)	155,40	
01-SP0029	Axis locators (piece)	12,40	









# 2/7 Product overview

06-230370	Axis needles and sockets (pair)	56,80
01-SP0040	Retention straps for Reference AB face-bow (pair)	41,70
01-SP0043	Mechanics set for Reference AB face-bow	135,00
01-SP0046	Flag adapter incl. screws for Reference AB (pair)	109,10
01-SP0012	EPROM for CADIAX® compact Firmware-update	113,60
01-SP0027	Foot switch for CADIAX® compact 2	181,10
01-SP0020M	Measuring stylus, CADIAX® compact 2	427,50
01-SP0023M	Measuring flag, CADIAX® compact 2	320,40
01-SP0052- MSET-10	Measurement sensory system CADIAX® compact 2, with magnet-retention technology (2 flags, 2 styli)	1.452,00
01-SP0052- MSET-10U	Measurement sensory system CADIAX® compact /2, with magnet-retention technology (2 flags, 2 styli), on return of used flags/styli	1.061,00
01-SPE0037	User manual for CADIAX® compact	21,50
01-SPE0038	User manual for CADIAX® compact 2	21,50
03-CCPRINT	Printer software for CADIAX® compact, including serial USB adapter (Minimum Cadiax compact Firmware Version 2.41 required)	182,10
01-SP0060	Upgrade Set CADIAX® compact to compact 2 w/o sensors	2.121,00
01-01 0000		
01-SP0061	Upgrade Set CADIAX® compact to compact 2 w/o sensors (price valid on return of old electronic box)	1.597,00
	Upgrade Set CADIAX® compact to compact 2 w/o sensors	1.597,00
01-SP0061	Upgrade Set CADIAX® compact to compact 2 w/o sensors (price valid on return of old electronic box)	,









# 2/8 Product overview

CADIAX®	diagnostic:	
02-00G200AM	CADIAX <sup>®</sup> diagnostic	12.845,00
	Electronic box including 2 flags (large), 2 Styli (2 pins each), foot switch, ca carrying case, USB-adapter, user manual, incl. GDSW version 'AM'	ables,
	(prerequisite: Condylograph/ Condylograph comfort) consisting of: 02-00G200 + 03-SOFTD000AM Condylograph / Condylograph comfort not included	
04-GCR009	Condylograph Set, complete, complete Transfer stand for Reference Articulator (standard) (for Artex®, SAM® Denar®/Hanau®, Whipmix on request)	3.578,00
04-GCR011	Condylograph comfort Set Transfer stand for Reference Articulator (standard) (for Artex®, SAM® Denar®/Hanau®, Whipmix on request)	3.578,00
02-00G300AM	CADIAX® diagnostic complete system consisting of : 02-00G200AM + 04-GCR009	16.423,00
02-00G400AM	CADIAX® diagnostic complete system consisting of : 02-00G200AM + 04-GCR011	16.423,00
® SAM is a trademark of S	MM Präzisionstechnik, Artex is a trademark of Amann Girrbach, Denar & Hanau are trademarks of Whi	p Mix,
Replacement p	arts/components for CADIAX® diagnostic	
04-GCR010	Condylograph comfort face bow	1.177,00
06-230240	3D joint support Condylograph (not included in set 04-GCF	330,00
06-230245	3D joint support Condylograph <i>comfort</i> (not included in set 04-GCR010 + 04-GCR011)	330,00
06-230335	Occlusal tray clutch, large	68,20
06-230330	Occlusal tray clutch, small (standard)	68,20
06-230345	Functional occlusal clutches (5 pcs)	152,20
02-SP0027	Foot switch for CADIAX® diagnostic	181,10







06-230245	(not included in set 04-GCR010 + 04-GCR011)	330,00
06-230335	Occlusal tray clutch, large	68,20
06-230330	Occlusal tray clutch, small (standard)	68,20
06-230345	Functional occlusal clutches (5 pcs)	152,20
02-SP0027	Foot switch for CADIAX® diagnostic	181,10
04-000014	USB – Serial Adapter	89,00
02-SP0044	Serial cable	20,80
02-SP0002M	Measuring stylus CADIAX® diagnostic	1.146,00
02-SP0107	CADIAX® diagnostic stylus cable	53,60
02-SPGR01M	Measuring flag, right, for CADIAX® diagnostic	726,00
02-SPGL01M	Measuring flag, left, for CADIAX® diagnostic	726,00
02-SP0100- MSET	Measurement sensory system, CADIAX® diagnostic, with "M" magnet technology (2 flags, 2 styli, incl. case)	3.741,00
02-SP0100- MSETU	Measurement sensory system, CADIAX® diagnostic, with "M" magnet technology (2 flags, 2 styli, incl. case) on return of used flags/styli	2.421,00
02-SPE0037	User manual for CADIAX® diagnostic	21,50
02-SP0010A	Upgrade CADIAX <sup>®</sup> diagnostic from CADIAX <sup>®</sup> III	4.928,00
02-SP0010	Upgrade CADIAX® <i>diagnostic</i> from CADIAX® III, in exchange for old system	3.589,00
02-SP0010AF	Upgrade CADIAX® diagnostics from CADIAX® III, including flags	5.999,00
02-SP0010F	Upgrade CADIAX® <i>diagnostics</i> from CADIAX® III, including flags, in exchange for old system	4.928,00



# 2/9 Product overview

## GAMMA DENTAL SOFTWARE®: (prices for single-user licence)

03-SOFTE000CC2	Recording softv	Recording software for CADIAX® compact 2	
03-SOFTE000C	Version "C"	CADIAX® Analyses	1.489,00
03-SOFTE000CW	Version "CW"	like version "C", with wax-up program	1.918,00
03-SOFTE000S	Version "S"	Central diagnosis- and planning module, including cephalometric program	1.929,00
03-SOFTE000AM	Version "AM"	All modules: CADIAX® Analyses & Condylography, Wax-up, incl. cephalometric analysis program	4.275,00
03-SOFTE000DB	GAMMA Docur	nent Browser base licence	399,00



## **SERVICE & TRAINING:**

05-001J	Adjustment for Reference SL articulator (device must be sent to the factory in Klosterneuburg – price excl. transport costs)	135,00
05-001	Annual CADIAX® on-site service, Germany/Austria only (excl. expenses – see 05-001F); check flags/styli, function control, test printouts, adjustment of devices.	186,00
05-002	Annual CADIAX® service- as 05-001002, but device to be sent to the factory in Klosterneuburg (price excluding transport costs)	115,00
05-001S	Installation and service - per hour, excl, expenses 05-001F	107,00
05-001T	Individual practical on site training,- excl. expenses 05-001F	153,00
05-001F	Staff and travel expenses, by car for each km	1,20



## **SOFTWARE MAINTENANCE:**

05-00E00C	Software maintenance for version "C" per month	31,00
05-00E0CW	Software maintenance for version "CW" per month	36,20
05-00E00S	Software maintenance for version "S" per month	47,65
05-00E0AM	Software maintenance for version "AM" per month	77,40

## LITERATURE:

ISBN 978-3-9501261-1-2

Book "The Masticatory Organ": 290,00

A fascinating book by Prof. Dr. R. Slavicek, full of experiences with the functions and dysfunctions of the masticatory organ. An important work, extremely helpful for understanding the possibilities of the GAMMA system.

ISBN 978-3-9501261-1-2





# 2/10 Product overview

04-000020	Multimedia course Wax-Up DVD "Class I Occlusion" Prof. Slavicek and team	199,00	
	ISBN 978-3-9501261-3-6		
04-000021	Multimedia course Wax-Up DVD "Class II, III. Cross Bite", Prof. Slavicek and team	150,00	Pris. Stantes and hear Years zaigon Socyatricides Authorist from the Yolina of Colonization Socyatricides Authorist from the Yolina of Colonization Socyatricides Authorist from the Colonization Socyatricides Wide-Up of Classes Colonization Sociation Sociat
	ISBN 978-3-9501261-4-3		Part States for the safe State
04-000018	Wax-Up base models (upper/lower) for Multimedia Wax-Up Course (please inquire for availability)  For Reference SL mounting, incl. distance blocks and mounting plates, pinned lower dental cast	169,00	EVIL men
04-002015	RRzF instruction CD, "Reference SL" (German)	44,00	■ NOT CHINA CASIN Enginee's - Massest Selecut Explorer  One mobile - Auct. Fronta: Casin F
04-003015	RRzF instruction CD, "CADIAX® compact 2" (German)	44,00	Prioratoticam na "Das Artikadoise-System EEFFRENCE Top SL"
04-001015	RRzF instruction CD, "CADIAX® diagnostic" (German)	44,00	The control of the co

# 3/1 Articulator & Face-bow





## 3/2 Articulator & Face-bow

## The Reference articulator system

The continuous developments in modern dentistry make ever greater demands on articulator systems. Their everyday application requires the highest precision, compatibility with other articulators and maximum flexibility. The increasing amount of cases requiring interdisciplinary therapeutic procedures calls for a system which can provide a standard basis for intercommunication. The development of the Reference system made a tool available, which provides solution-oriented procedures for the simple standard case, as well as for the complex "full mouth" reconstruction.

- Articulator/Face-bow system for arbitrary or exact mounting, relative to the hinge axis
- Synchronic calibration of articulators, with and without split-system
- An upgradeable articulator, from the simple occludator to the fully adjustable, all-purpose device
- Integrated magnet retention system
- Avoids problems caused by cast expansion, by means of block mounting
- Condylar position measurement (CPM), condylar position variance (CPV), measures and sets the occlusal plane, anterior tooth diagnostics
- Precast incisal table with various slopes up to a comfortable sequential table for wax-up of sequential occlusion
- Upgradeable face-bows for electronic recording of the mandibular joint with CADIAX®
- Designed by practicians for the dental practice and the lab
- · Designed by instructors for teaching and research

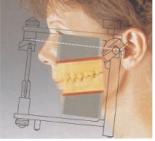
## Reference SL – from centric surety to ex-centric perfection

The unique construction of the condylar housing in Prof. R. Slavicek's Reference SL articulator solves this problem in a special way: not the condyles, but rather the axes, adapted from the hinge axis, glide on sagittal and transverse inserts, as lightly and easily as if on runners.

**For the practice:** Ideal for the everyday average patient: full dentures, part dentures, implants, full-mouth rehabilitations, functional diagnostics, goal-oriented initial therapy, orthodontics, oro-facial surgery.

For the lab: They are all exactly the same. Safe, easy to handle, and multifunctional. Constantly upgradeable.







06-231380 Re

Reference SL Articulator

1.177,00



## 3/3 Articulator & Face-bow

Components and spare parts:				
06-231347	126,50			
	white (pair)			
	(for Reference SL up to serial			
	no. 06xxxx),			
06-231387	Centric locks , white , pair (for	78,50		
	Reference SL from serial no. 07xxxx)			
06-231388	distance ring (for Reference SL	47,50		
	from serial no. 07xxxx)			
06-231382	SL centric O-rings, Ø 20mm /	11,40		
	2mm, red ( pair)			
06-231303	SL index pin	30,50		
06-231383	SL retention magnet (1 pc.)	10,20		
06-231384	Magnet removal pin (1 pc.)	10,80		
06-231385	Reference SL posterior support	28,40		
	pin			
06-231911	Ball-shaped allen key 3 mm	14,60		
06-231912	Ball-shaped allen key 2.5 mm	7,30		
06-231308	SL Incisal pin unit	182,10		
06-231307	SL Incisal pin	52,60		
06-218180	SL Incisal pin height-adjustable	131,10		

The Reference SL provides the guidance reliability of a Non-Arcon, without losing the didactic and dynamic-geometric advantages of the Arcon construction.

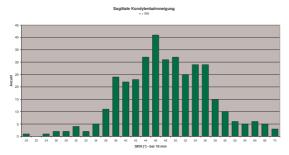
The user can see the guidance units

and check the contact on the guide elements, without needing to perform any acrobatics to control the unit.

## Reference – a practical all-rounder par excellence

The guidance elements are easily exchangeable. The user has any number of options, up to and including individually milled inserts. The articulator can be easily and effortlessly adjusted to the individual movement tracks.

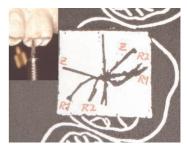




The statistics above, displaying the distribution of condylar guide inclination and compiled from registrations of over 300 patients, demonstrate the necessity of individual eccentric articulator programming.

An additional evaluation shows that the movement patterns of a large number of the patients indicate therapy-relevant retrusive movements. The SL articulator shows the differences in the formation of the occlusal surfaces.





Cusp tracks on the occlusal table showing different retrusive characteristics (Z=none, R1=surtrusive, R2=detrusive)



# 3/4 Articulator & Face-bow

	Condylogram w/no working side retrusion	Condylogram w/working side retrusion	Condylogram w/ working side surtrusion	Using a detrusion guide element
Patient:	- N			1 ST
Articulator:				

The SL articulator is ideally suited for displaying most mandibular movement patterns. The advantage: no time-wasting "screwing" and "adjusting", just simply click in the guide .

06-231310  Component al	Program Set SL 26-piece in color-coded, transparent box, including 4 SCI inserts + 4 TCI inserts + 5 protrusion stops.  and replacement parts (pair):	428,00			
06-231321	TCI – insert black	45,40		The Carl	
06-231322	TCI – insert white *	45,40			
06-231323	TCI – insert yellow	45,40			
06-231324	TCI – insert red	45,40			
06-231325	TCI – insert blue	45,40	1		
			06-231341	Protr Stop yellow 1 mm	35,90
06-231331	SCI - insert white *	32,20	06-231342	Protr Stop red 2 mm	35,90
06-231332	SCI – insert yellow	32,20	06-231343	Protr Stop blue 3 mm	35,90
06-231333	SCI – insert red	32,20	06-231344	Protr Stop green 4 mm	35,90
06-231334	SCI – insert blue	32,20	06-231345	Protr Stop black 5 mm	35,90
06-231335	SCI – insert black	32,20	06-231340	Protr Stop Set * 0,5/1,5/2,5mm (special part)	107,70

<sup>\*</sup>standard equipment for articulator, not included in program set

## Reference – Mounting system with magnetic retention



The distance blocks are held in the articulator through magnetic retention. The retaining magnet is built into the articulator, so that the full height of the unit can be utilized, while maintaining even traction.



This minimizes the disturbing influences of cast expansion during the hardening process. Different heights and slopes allow for optimal use.

The red mounting plates are screwed, removable, into the distance blocks.

If the block is unscrewed from the model, it leaves a print in the cast, so that an identical block can be screwed in, if repositioning is necessary. During active treatment, the distance block should not be unscrewed.



# 3/5 Articulator & Face-bow

06-231550	Mounting plates, 50/pkg., including nuts	76,70
06-231551	Nuts, 50 pcs.	8,50
06-231510	Distance blocks, horizontal 1 (standard)*	16,70
06-231511	Distance blocks, horizontal 2 (+8mm)*	18,10
06-231512	Distance blocks, horizontal 3 (+16mm)*	19,20
06-231520	Distance blocks, slanted A (standard)*	18,10
06-231521	Distance blocks, slanted B (+8mm)*	19,20
06-231522	Distance blocks, slanted C (+16mm)*	20,30
06-231525	Distance blocks, Set (1 pair of each type)	111,40
06-231516	Lens head screw for distance blocks 1 + A (10 pcs)	5,50
06-231517	Cylinder head screw for distance blocks 2,3,B,C (10 pcs)	23,10
06-231518	Retention disc (10 pcs)	22,80



\* prices and delivery apply to 2 blocks per package

## Reference – synchronic calibration without compromises

Tolerance can regularly be checked with the calibration key.

This unit synchronizes all Reference articulators (types A, I, and SL) over the axes, in the range from +/- 10  $\mu$ m receptors exactly. So, everyone involved is working with identical machines, making it possible to exchange models and guarantee real comparisons.

The calibration key is also necessary for setting the 0-point when using the CPM and CPV applications.



In the dental practice or lab, the articulator can be newly adjusted and/or readjusted over the horizontally arranged axes:



rearrange the axes with the calibration key



casting the readjusted articulator axes



06-231900	Reference Calibration Key	395,00	
06-231349	SL Adjustment set 1 for Reference SL up to serial no. 06xxxx	109,30	
06-231386	SL Adjustment set 2 for Reference SL from serial no. 07xxxx	109,30	
06-231349A	Articulator Axes with O-rings (pair)	53,60	
06-231349H	Casings (pair)	29,10	
05-001J	Adjustment for Reference SL articulator (device must be sent to the factory in	135,00	

Klosterneuburg – price excl. transport costs)

All components are equally axis oriented. Then the models can be transferred from one articulator to another without second thoughts.



## 3/6 Articulator & Face-bow

## Reference - Standard incisal tables

Standard incisal guidance tables from flat to 55 degrees; centric adjustable, mounted on self-centering base.

The flat plate was designed for lower jaw mounting and the preparation of individual autopolymeric anterior guides. The 30-, 40- and 55 degree plates are equipped with 5 degree steeper protrusive inclinations.

06-231720	Standard incisal table, flat	78,30
06-231723	Standard incisal table, 30degrees	81,50
06-231724	Standard incisal table, 40degrees	81,50
06-231725	Standard incisal table, 55 degrees	81,50
06-231721	Standard incisal table attachment, flat	30,10



With periodic gradation, adapted from the natural front situation.

## Reference – individual anterior guidance unit

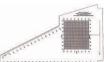
Two-stage anterior guidance in one purely protrusive part (with track grooves), in three variations; straight, 1mm and 2mm curved course of the S2 distance, with 14 degree angle of inclination.

The two pins are plugged into separate jacks in the articulator, and are individually adjustable to zero position. The complete unit as shown, with 3 exchangeable protrusion inserts.

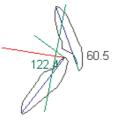
Adjustable, protrusive from 0-80 degrees, lateral from 20-65 degrees.

06-231750	Anterior guidance unit with double-pin for protrusion/laterotrusion	427,00
04-000004	Weber's 3D measuring template for metric measurement of cusp coordinates directly in the Reference SL articulator.	38,00





## Reference - Anterior tooth diagnostics



Anterior tooth shaper: A container for hard-silicone, aligned relative to the reference plane, to take front tooth impressions in the articulator. The hard putty can be cut into sections and the palatal surfaces can be measured from the profile. These values serve for evaluating the relation between anterior tooth guidance-joint guidance-occlusal plane in functional diagnostics, as well as for the

articulator programming in reconstruction and additionally for checking the tooth position and functional surface in orthodontics.

06-231800	Anterior tooth shaper	229,00



The ideal supplement to the CADIAS cephalometric program in Gamma Dental Software<sup>®</sup>.



## 3/7 Articulator & Face-bow

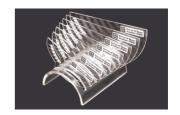
## Reference – Compensation Curve Analyzer

Curve of Spee Analyzer for SL-Articulator 7 transparent templates with integrated curve radius in steps of 5 mm from R60-R90.

With the help of those parts it is possible to measure or reconstruct the curve of Spee

04-000019	Curve of Spee Analyzer for SL-Articulator	311,00

7 transparent plates with integrated curve radius in steps of 5mm from R60-R90 (pedestal not included)



#### **Brux checker**

Evaluation of grinding patterns during sleep bruxism according to Prof. Sato. The foil registers bruxism by abrasion of the foil

04-000050	Brux checker foil (10 foils)	39,60
04-000055	Occlusogram wax, green, 100 sheets for use in dental laboratory	71,80



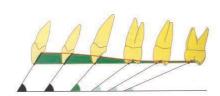




## Reference – simple conversion to sequential occlusion



Based on its flexible concept of using exchangeable guidance tables in various gradations, the sequential incisal table is geometrically and didactically easily comprehensible and allows to define occlusion concepts by predetermining an angle of disocclusion. The sequential incisal table is extremely simple and easy to use, both in its diagnostic and technical wax-up applications. The fan-shaped guide surfaces of the table allow for direct assignment to a tooth and a simple implementation of the natural sequential occlusion concept.





lateral guidance waxed with the sequential incisal table



The reconstructive wax-up concept is determined by selecting the individual elements. Depending on which occlusal surface (tooth) is being worked on, the table is set to the corresponding mark found on the side of the base plate, by sliding forward or backwards, respectively.



## 3/8 Articulator & Face-bow



Guidelines are provided by a program, which processes the inclination of the joint track (CADIAX®) to the axis-orbital plane, as well as the selected Bennett element as parameters in the 2-dimensional table.

The CADIAX® system calculates the values automatically!







44º (Protrusiv) 55º (Tooth 3) 44º (Tooth 4) 37º (Tooth 5) 29º (Tooth 6)



47º (Protrusiv) 58º (Tooth 3) 47º (Tooth 4) 40º (Tooth 5) 33º (Tooth 6)



54º (Protrusiv) 65º (Tooth 3) 52º (Tooth 4) 46º (Tooth 5) 39º (Tooth 6)

04-000013	Sequential Incisal Table set*	607,00
04-000013T	Base adapter	203,60
04-000013B	Guidance blocks, 3-piece, blue	172,60
04-000013G	Guidance blocks, 3-piece, green	172,60
04-0000130	Guidance blocks 3-piece, orange	172,60
04-000013Y	Guidance blocks, 3-piece, yellow*	172,60

In asymmetric cases, the inserts (colors) may be combined arbitrarily.

\* The.set consists of the base plus three (blue, green, orange) pairs of guidance blocks. The set does not include the yellow blocks.

04-000020	Wax-up Multimedia DVD Digital Wax-Up course "Class I Occlusion" Prof. Slavicek and Team ISBN 978-3-9501261-3-6	199,00
04-000021	Wax-up Multimedia DVD Digital Wax-Up course , "Class II, III, Cross Bite", Prof. Slavicek and Team ISBN 978-3-9501261-4-3	150,00
04-000018	Wax-up base models (upper/lower) for multimedia wax-up course (please inquire for availability)  (For Reference SL mounting, incl. distance blocks and mounting plates, pinned lower dental cast)	169,00



## Reference – Occlusal plane measuring, planning and setting

This unit allows you to measure and/or lay out the individual occlusal plane in degrees.

In two parts for the different inclinations of the right and left dentition.

Mounting takes place in the Reference articulator.





## 3/9 Articulator & Face-bow

## Reference – flexible Condylar-Position-Measurement (ICP vs. RP)

**CPM SL** (Condyar-Position-Measurement adapter) – A pair of mechanical measurement adapters for the metric comparison of the centric and intercuspal positions of the mandible. Adaptable on the SL articulators so it is not necessary to buy a special appliance.

articulator- sc		
06-231350	CPM-SL, including marker pin (pair)	227,00
06-231351	CPM-SL marker pin	10,80
06-231352	Reference Writing labels CPM (8 sheets, each 25 labels)	34,40
06-231353	Transparent protective foil	19,90



## E-CPM - Electronic Condylar Position Measurement

06-230600	E-CPM electronic condylar position	4.590,00
	measurement, complete	

**E-CPM Upgrade** – upgrade device for CADIAX<sup>®</sup> compact 2 for electronic measurement of condylar positions system requirement: CADIAX<sup>®</sup> compact 2 (01-10E200-2)



**A-CPM** – Mechanical condylar position measurement, a stand-alone system without the need for electronics

This device enables a metrical measurement comparing different lower jaw positions and the resulting effect on the jaw joint.

For diagnostic purposes and to guarantee the quality of the prosthetic reconstructions the support function of the posterior occlusion in ICP can be checked in relation to a centric reference position (RP) of the mandible.



06-230620	A-CPM Upgrade set mechanical	322,00
	((digital measurement unit, mechanic flags, marker pin, allen	
	key, writing labels)	
06-230630	Reference-CPM Set for condylar position	1.177,00
	measurement, incl. 06-230610 E-CPM +	
	06-230620 A-CPM Upgrade Set	
06-230631	Diagnostic notes condylar position	16,00
	measurement (60 sheets)	
06-230632	A-CPM writing labels (10 sheets each 12 labels)	16,00



# 3/10 Articulator & Face-bow

## Reference – change mandible position with the Variator



CPV (Condylar-Position-Variator): enables exact metric positioning of the condyle position in three spatial directions, e.g., for setting a therapeutic mandible position, for making splints, or for a diagnostic set-up in orthodontics.

Ideal for application in combination with the CADIAX $^{\otimes}$  Registration System. A joint position determined by CADIAX $^{\otimes}$  can be set directly in the unit!

The calibration key (06-231900) is necessary for determining the centric zero position!



06-230750 CPV (Condylar-Position-Variator) 2.070,00



Left Side				
Х	0,37 mm.			
Y	-0,13 mm.			
Z	2,44 mm.			

## SL - SLA according R. Slama

Articulator and variator function combined in one single device. The Variator-articulator allows exact adjustability of the LJ position according to the diagnosed data of Cadiax and Cadias. The changed part of the SL articulator allows a position change in X-, Z and Y-axis in the range of 1/10mm, the adjustment screw at the changed condylar housing allow retrusive and protrusive settings as well in the range of 1/10 mm without abandoning the advantages of the SL articulator.

for information please phone: +49 (0)9704 60392

06-230800 SL – SLA acc. R. Slama Price on request





## 3/11 Articulator & Face-bow

## **Face-Bow**

No model should be mounted without first determining a spatial jaw relation. With the Reference system, GAMMA offers the possibility of transferring arbitrary and exact models of the upper jaw. With the proven and tested 3D joint support the face-bows can be applied simply and safe.

## Reference - anatomic face-bow

Parallel adjustable anatomic face-bow, with 3D joint support. With this face-bow, there is no undesirable axis displacement, e.g., from a shearing effect. Its box-like construction and double-clamping ensure the utmost stability. In its construction, the Reference AB Face-bow is aligned with the AO-plane (hinge axis-orbital plane), the front reference point lies 22 mm below the lowest recession of the Glabella.

06-230430	Reference AB face-bow (incl. 3D joint support)	696,00
06-230433	Reference AB attachment screw (pc.)	8,50
06-230435	Reference AB Porus supports (pair)	25,00
06-230436	Reference AB articulator adapter screw (pair)	33,50
06-230443	Glabella support for Reference AB face bow	134,00
06-230444	Glabella cushion comfort (5 pcs)	41,50
06-230445	Glabella support comfort (incl. 3 pcs Glabella cushions comfort)	95,40
06-230470	3D joint support for AB face-bow	289,00
06-230471	Reference adapter screw (for 3D-joint support)	10,80
06-217611	Bite fork, partial, 2 pieces should only be purchased with 3D-joint support, not incl. in 04-GCR009 or 04-GCR011)	34,70
06-230465	Recording plates for Reference AB face bow, red (pair)	120,00
06-230111	Recording plates (flag) for Cadiax compact flag adapter (pair)	130,00
01-SP0046	Flag adapter incl. screws for Reference AB (pair)	109,10
06-642150	Bite Tabs (180 pieces.)	90,00





If the AO plane is left, an accessory set is available with adjustable orbital pointer. However, in this case, mounting is then only possible in the upper jaw transfer stand (Art. # 06-230510). Sterilizable, detachable ear-plugs.

For data recording with CADIAX® compact, the AB-Bow can be upgraded with easy-to-use accessories.

## The advantages are obvious: one bow, two applications!

Mounting ele	Mounting elements:		
06-230480	Face-bow support	125,50	
06-230490	Orbital pointer for Reference AB face-bow incl. mounting axes	119,60	
06-230585	Bite fork support	107,00	
06-230566	Mandible mounting clamp – for a stable position of the articulator during LJ mounting	111,00	





# 3/12 Articulator & Face-bow

	<b>Reflitex:</b> for model transfer and possible conversion from Reference into the Artex <sup>®</sup> system.		
06-216280	Transfer stand AB- receives the face-bow registration from the AB bow. The Reference distance block plus mounting plate serve as transfer table	134,00	
06-216320	Reflitex Combi-set- 3-piece Splitex plate set for Reference articulators. Simply "click-in" upper and lower jaw plates. The Reference SL is adjusted to the Artex <sup>®</sup> level.	227,00	
06-216321	Upper jaw plate for Reflitex combination set	111,00	
06-216322	Lower jaw plate for Reflitex combination set	170,00	
06-216330	Reflitex combination set for CPM 2-piece Splitex plate set (UJ plate and LJ base plate) for E-CPM and A-CPM. Simply click in upper and lower jaw plates.	198,00	
06-216281	Reflitex base plate for transfers table or CPM	100,00	
06-216011	Splitex <sup>®</sup> distance plate +10mm synchronization Artex <sup>®</sup> Carbon to Artex <sup>®</sup> Standard	101,00	





## Reference - Instructional CD

RRzF instructional course CD-ROM "Reference SL Operation and Training". This instructional CD was created by Tilman Fritz, one of the most experienced users of the GAMMA system.

Step by step, you learn exactly how to use the Reference SL articulator, from mounting models to eccentric articulator programming.

Helpful for the entire team of dental practice- and lab team.

04-002015	BBzF Instructional CD Reference SI "	44 00



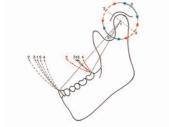
## Reference – exact hinge axis with the Condylograph



A high-precision measurement device, for the dentist working with functional diagnostics. The upper face-bow is fixed securely to the head by means of 3-point support technology (Nasion and 2x on the forehead) and the head-neck flex-band. The side arms lie without pressure on the ear-saddle. The face-bow is mounted easily and safely and is comfortable for the patient to wear.

The light construction of the mandibular bow allows for precise setting of the registration pins onto the exactly determined hinge axis.

## Why an exact hinge axis?



effects of mandibular rotational movements with different mounted axis points

The graphic shows the effects of mandibular opening- and closing movements during changes in the position of the hinge axis point of rotation in the articulator. With the anatomic facebow, the joint axis is mounted to a statistical axis point, derived from the examinations of a number of patients. There is then the possibility of considerable deviation of the mounted axis to the actual kinematic axis.

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# 3/13 Articulator & Face-bow





example of ICP in the articulator with strongly deviating hinge axis mounting or model position

An exact mounting of the hinge axis is indicated in cases where vertical modifications are carried out, e.g., splint therapy or milling-in, vertical changes during reconstructions, in total prosthetics or implant prosthetics.



the condylograph carries the measurement sensory system used in the CADIAX diagnostic system

A further important point, with regard to diagnostic registration with CADIAX: in order to eliminate geometric distortions in the movement tracks, caused by rotation, the hinge axis must always be located exactly.

The upper jaw model transfer with exact localized hinge axis and individual reference plane in the Reference, Artex<sup>®</sup> and SAM<sup>®</sup> articulators.

## Indications:

- Cases with planned vertical modifications
- Working with centric registration
- Remounting restorations
- Remounting in total prosthetics
- For exact occlusion diagnostics in the articulator
- For distortion-free joint diagnostics with CADIAX®

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04-GCR009	Condylograph Set complete transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau® articulator systems on request)	3.578,00
04-GCR011	Condylograph comfort Set complete	3.578,00
	transfer stand for Reference articulator (standard) (for Artex®, SAM®, Denar®, Hanau® articulator systems on request)	
04-GCR012	Condylograph <i>comfort</i> Set for CADIAX <i>compact 2</i>	3.578,00
	transfer stand for Reference articulator (standard) (for Artex <sup>®</sup> , SAM <sup>®</sup> , Denar <sup>®</sup> , Hanau <sup>®</sup> articulator systems on request)	
04-GCR014	Condylograph Set for CADIAX compact 2	3.578,00
	transfer stand for Reference articulator (standard) (for Artex <sup>®</sup> , SAM <sup>®</sup> , Denar <sup>®</sup> , Hanau <sup>®</sup> articulator systems on request)	
04-GCR010	Condylograph comfort face bow	1.177,00
04-GCR013	Extension set for Condylograph + for Condylograph <i>comfort</i>	402,00
	to enable working with Cadiax compact 2 using	

patient's individual axis







# 3/14 Articulator & Face-bow

06-230292	Forehead-neck band for condylograph, 5pcs/pkg	33,80
06-230288	Retention straps for Condylograph <i>comfort</i> , 3 pairs/pkg, version 1	24,70
06-230290	Retention straps for Condylograph comfort, version 2	24,70
06-230291	Reference headband for Condylograph comfort	24,70
06-230250	Bite fork support for Condylograph	206,80
06-230251	Bite fork support for Condylograph comfort	206,80
06-230252	Adapter for bite fork support for Condylograph comfort	63,30
06-230260	Bite fork for Condylograph and Condylograph comfort	41,90
06-230240	3-D joint support Condylograph (not included in set 04-GCR009)	330,00
06-230245	3-D joint support Condylograph <i>comfort</i> (not included in set 04-GCR010 + 04-GCR011)	330,00
06-217611	Bite fork, partial, 2-pieces (Should only be purchased with 3-D joint support, not included in 04-GCR009 set)	34,70
06-235145	Axis indicator holder (pair)	251,00
06-230370	Axis needles and sockets (pair)	56,80
06-230155	Axis pins, long (pair)	36,50
06-230156	Axis pins, short (pair)	36,10
06-230110	Recording plates for Condylograph and Condylograph <i>comfort</i> , red (pair)	120,00
06-230270	Glabella support for Condylograph	52,60
06-230285	Reference point indicator for Condylograph	186,80
06-230286	Reference point indicator T for Condylograph <i>comfort</i>	159,70
06-230287	Reference point indicator P for Condylograph <i>comfort</i>	159,70
06-230284	Reference point indicator individual for Condylograph <i>comfort</i>	207,00
Components	s and spare parts for mandible face-bow	
06-235306	Mandible Face-bow, indiv. adjustable	515,00
06-231352	Reference Writing labels (8 sheets, each 25 labels)	34,40
06-230335	Occlusal tray clutch, large	68,20
06-230330	Occlusal tray clutch, small (standard)	68,20
06-230345	Functional occlusal clutches (5 pcs)	152,20
Component	s and Replacement parts for articulator mountin	าต
06-230510	UJ Transfer stand for Reference, incl. reference plane adjustment reed	510,00
06-230512*	UJ Transfer stand for SAM® incl. reference plane adjustment reed and distance ruler (Artex®, Denar®/Hanau® please inquire for availability)	661,00











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# 3/15 Articulator & Face-bow

06-230520	Reference plane adjustment reed for 06-230510 (Reference)	27,60
06-230522	Reference plane adjustment reed for 06-230512 (SAM®) (Artex®, Denar®/Hanau® please inquire for availability)	52,30
06-230530	Distance ruler	64,50
06-230570	Pedestal support	37,60
06-230566	Mandible mounting clamp- for a stable free standing position of the articulator during LJ mounting	111,00

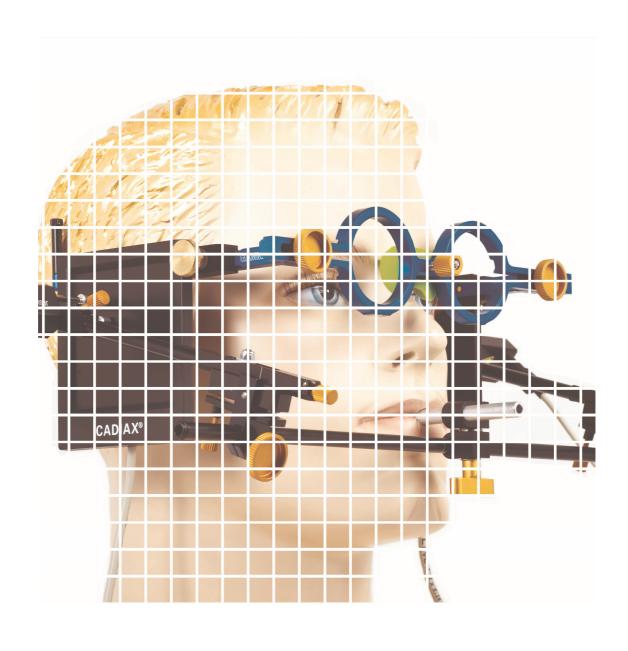


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# Notes:

# 4/1 Recording – CADIAX®





# 4/2 Recording – CADIAX®

#### Recording of mandibular movements with CADIAX®

Electronic registration of mandibular movement is now a standard procedure in many dental practices. The range of application is diverse: CADIAX® offers individual patient value-settings for semi- and fully-adjustable articulators, thus satisfying all of your needs, from joint-related reconstructions to the diagnostics of dysfunction.

- Bilateral, simultaneous, timed 3D registration of condylar movement
- Registration of sagittal and transversal condylar tracks
- Automatic conversion of the joint track curves for the articulator
- Electronic Condylar-Position-Measurement (CPM) directly on the patient
- Individual or standardized registrations according to Prof. Slavicek
- Variety of evaluation- and display possibilities, including zoom functions, replay, overlays,
   3D-animation and articulator calculations
- Registration of hinge axis rotation (only CADIAX<sup>®</sup> diagnostics)
- Hinge Axis calculation and adjustment with real-time display (only CADIAX<sup>®</sup> diagnostic)
- Computer-supported incisal table calculations

#### CADIAX® - You CAN believe your eyes!



CADIAX® measures near the joint, on the axis; a distinct advantage in the practice. On the one hand, the proven electronic measurement technology guarantees high precision; on the other hand, the system is easily comprehensible and transparent. With CADIAX®, you can review and control at any time, ideal for your practice.

The hinge axis determined by CADIAX® is precisely transferred to the articulator through the face-bow, which is extremely stable.

#### CADIAX® - One recording system serves a variety of articulator systems



At the push of a button, CADIAX® calculates articulator valuesettings for the **Reference SL** articulator as well as for several other articulator systems, such as:

Artex<sup>®</sup>, Denar<sup>®</sup>, Hanau<sup>®</sup>, Ivoclar<sup>®</sup>, KaVo<sup>®</sup>, Panadent<sup>®</sup>, Reference SL, SAM<sup>®</sup>, WhipMix<sup>®</sup>.

		Sagitt	al Condyla	ar Guidanc	e Referenc	e® SL	
	Inlay		Right		Left		
		3rd mm	5th mm	10th mm	3rd mm	5th mm	10th mm
	Straight	70	70		60	64	58
	Convex	•64	•68		•54	•60	•60
	Retrusiv	Black	Black		Black	Black	Black

Transverse Condylar Guidance Reference® SL						
Right Left				Left		
	3rd mm	5th mm	10th mm	3rd mm	5th mm	10th mm
WHITE	•11	•15	•13	•6	•12	•11
YELLOW	0	0	0	0	0	0
RED	0	0	0	0	0	0
BLUE	0	0	0	0	0	0

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# 4/3 Recording – CADIAX®

#### CADIAX® - diagnostic data

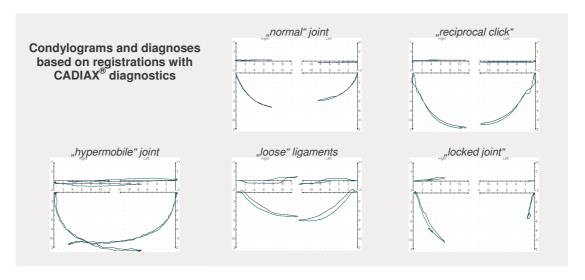
Diagnostics relative to therapy and standardized documentation are called for in running a modern, "evidence based" dental practice. GAMMA offers two systems (CADIAX® compact 2 and CADIAX® diagnostic) which, depending on their application, offers solutions for any situation.

The *compact* system was designed for standard cases. Perfectly qualified for articulator programming, with additional options for screening dysfunction.



The "big brother", CADIAX<sup>®</sup> *diagnostic*, measures translational- <u>and</u> rotational mandibular movements at the exact hinge axis, using a double-stylus system. The system fulfils all the needs of the dentist working in functional diagnostics. In addition to the standard movements, the system can also register functional- and parafunctional movements: chewing, speaking, bruxism. Using these as overlays to the limiting movements, you can ascertain any deviations from the average patterns.

With the electronic Condylar-Position-Measurement (CPM), the difference between centric joint position and ICP can be measured, directly on the patient. This is not only of diagnostic interest, but also serves in ensuring the quality of dental reconstructions.



#### CADIAX® - therapy-relevant data





Paying attention to the individual patient's functional pattern helps in minimizing the risks of therapy. Strategic planning of occlusal parameters, in conjunction with habitual hinge axis movements, provides a solid basis for deciding on therapeutic measures. For example, decisions regarding the occlusal plane, inclination of anterior guidance, or eccentric disocclusion concepts based

on the posterior joint guidance are easily arrived at and comprehensible.



# 4/4 Recording – CADIAX®

#### CADIAX® - joint specific splint positions



In conjunction with the Condylar-Position-Variator (Art. # 06-230750), therapeutic splint positions can be planned and implemented exactly in all spatial directions.

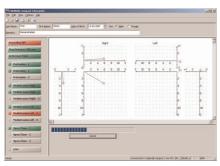


#### CADIAX® - comparing the systems

	CADIAX® compact 2	CADIAX® diagnostic
Joint axis	Anatomic – arbitrary or exact	Kinematic – exact computer supported hinge-axis location
Face-bow	Reference AB face-bow	Condylograph
Reference plane	Francfort plane (FH)	Axis-Orbital plane (AOE) or chosen arbitrarily
Control	Windows PC	Windows PC
ADC (internal resolution)	16 Bit (0,01mm)	16 Bit (0,001mm)
Data transfer	USB	Serial (USB possible)
Stylus	Single (only translation)	Double (translation and rotation)
Flag	40 x 40mm	60 x 60mm
AUX-Input	-	Right and left 1 input
Sync-Output	-	1
Recording time	4,5 seconds	4,5 – 18 seconds variable
Number of recordings	12 + 10 CPM	Practically unlimited
Printout	Only through Windows PC	Only through Windows PC
Scope or application	Individual value settings for diverse articulator systems Instrumental functional analyses in the preliminary examination ("Screening")	Individual value settings for diverse articulator systems Instrumental diagnostic detail analyses Scientific examinations/evaluations
	Documentation Quality insurance	Documentation
	Quality control	Quality insurance Quality checking
Application time (expert user)	About 7 min.	about 30 min.

# 4/5 Recording – CADIAX®

#### CADIAX® compact 2



Recording system consisting of an electronic measuring system and an easily manageable Windows software for quickly registering mandible joint movements. Uses the Reference AB face-bow, fixed to the head and holding the flags, and a mandible bow, adjusted to an arbitrary hinge axis. CADIAX® compact 2 is easy to use and the results are reproducible.

The system saves following curves, max. 3 per patient: protrusion, mediotrusion right and left, open/close. In addition, 10 CPM positions may also be recorded.

The individual patient's articulator calculations are done at the push of a button. For documentation, the curves are printed out directly on a color printer. Optionally, the data can be saved in the Gamma Dental software.

software.			
01-10E200-2	CADIAX® compact 2  Electronic registration system, consisting of  Electronic box 2 Flags 2 Styli Foot switch cables Manual Recording software	3.696,00	Capav
	(Gamma Dental Software® not included)		
06-230430	Reference AB face-bow (incl. 3D joint support)	696,00	
06-230451	Upgrade set for AB face-bow (mandible bow, clutch small, retention straps with pins)	408,00	E S
01-10E300-2	CADIAX <sup>®</sup> compact 2 basic system	4.800,00	Consisting of: 01-10E200-2 + 06-230430 + 06-230451 + 03-SOFTE000CC2

#### Gamma Dental Software® (GDSW)

Gamma Dental Software<sup>®</sup> for Windows is the ideal supplement to CADIAX *compact 2.* A variety of analysis options, in conjunction with a modern database system. (Details about Gamma Dental Software<sup>®</sup>

01-10E300-2C	CADIAX® compact 2 basic	6.289,00		
03-SOFTE000DB	GAMMA Document Browser base licence	414,00		
03-SOFTE000AM	GDSW Version "AM" like version "CW", including cephalometric analysis program	4.275,00		
03-SOFTE000S	GDSW Version "S" Central diagnosis and planning module, including cephalometric program	1.929,00		
03-SOFTE000CW	GDSW Version "CW" like version "C", with wax-up program	1.918,00		
03-SOFTE000C	GDSW Version "C" database system with enhanced CADIAX <sup>®</sup> analyses	1.489,00		
03-SOFTE000CC2	Recording Software for CADIAX® compact 2	337,00		
can be found in the "Diagnostics/Software" chapter)				





requires Windows® XP. Vista, Windows 7

Prices apply to single user licenses!

## Capiax Compact 2 basic | 6.289,00 | Consisting of:

| system incl. Gamma Dental | 01-10E200-2 + 06-230430 + 06-230451 + |
| Software Version "C" | 03-SOFTE000C



# 4/6 Recording – CADIAX®

Spare parts/ accessories for	r CADIAX® compact 2
------------------------------	---------------------

Oparo parto	accessories for OADIAX compact	
01-SP0065	CADIAX compact 2 basic component	1.688,00
06-230452	Upgrade set individual for AB face bow 06-235306 mandible bow 06-230370 axis needles 01-SP0040 retention straps 06-230330 clutch small 06-231352 Reference writing labels 06-230111 recording plate red	849,00
04-GCR012	Condylograph comfort Set for Cadiax compact 2	3.578,00
	Transfer stand for Reference articulator (standard) (for Artex <sup>®</sup> , SAM <sup>®</sup> , Denar <sup>®</sup> , Hanau <sup>®</sup> , Whipmix articulator systems on request)	
04-GCR014	Condylograph comfort Set for Cadiax compact  Transfer stand for Reference Articulator (standard); (Artex®, SAM®, Denar®/Hanau®, Whipmix on request)	3.578,00
04.000010	•	1 177 00
04-GCR010	Condylograph comfort face-bow	1.177,00
06-235306	Mandible Face-bow, indiv. adjustable	515,00
06-230335	Occlusal tray clutch, large	68,20
06-230330	Occlusal tray clutch, small (standard)	68,20
06-230345	Functional clutches (5 pcs)	152,20
06-230350 06-230444	Mandibular clamp for LJ bow Glabella cushion comfort (5 pcs.)	114,80 41,50
06-230445	Glabella support comfort (incl. 3 pcs Glabella cushions comfort)	95,40
04-000011	Bow stabilizer for the AB Upgrade set, arbitrary	155,40
01-SP0029	Axis locators (piece)	12,40
06-230370	Axis needles and sockets (pair)	56,80
01-SP0040	Retention straps for Reference AB face bow (pair)	41,70
01-SP0043	Mechanics set for Reference AB face-bow	135,00
01-SP0046	Flag adapter incl. screws for Reference AB (pair)	109,10
01-SP0012	EPROM for CADIAX® compact Firmware-Update	113,60
01-SP0027	Foot switch for CADIAX® compact 2	181,10
01-SP0020M	Measuring stylus, CADIAX® compact 2	427,50
01-SP0023M	Measuring flag, CADIAX® compact 2	320,40
01-SP0052- MSET-10	Measurement sensory system CADIAX® compact 2, with magnet-retention technology (2 flags, 2 styli)	1.452,00
01-SP0052- MSET-10U	Measurement sensory system CADIAX® compact 2 with magnet-retention technology (2 flags, 2 styli), on return of used flags/styli	1.061,00
01-SPE0037	User manual for CADIAX <sup>®</sup> compact	21,50
01-SPE0038	User manual for CADIAX <sup>®</sup> compact 2	21,50
03-CCPRINT	Printer software for CADIAX® compact, incl. serial USB adapter (Minimum Cadiax compact Firmware Version 2.41 required)	182,10

















# 4/7 Recording – CADIAX®

01-SP0060	Upgrade Set CADIAX® compact to compact 2 w/o sensors	2.121,00
01-SP0061	Upgrade Set CADIAX® compact to compact 2 w/o sensors	1.597,00
	(price valid on return of old electronic box)	
01-SP0062	USB cable CADIAX® compact 2	33,80
01-SP0063	Retention strap for CADIAX® compact 2 electronic box, 25mm	17,00
01-SP0064	Systainer case for CADIAX® compact 2	248,00



#### CADIAX® diagnostic



The high-end condylography system from GAMMA.

CADIAX<sup>®</sup> diagnostic provides high-resolution registration of all ranges of free mandibular movement. In addition to all of the possibilities of articulator- and incisal table programming, CADIAX<sup>®</sup> diagnostic especially meets the demands of a functional diagnostic registration system.

The dynamic hinge axis location makes it easy to locate and reproduce the exact axis. Transfer of the bite registration in the articulator, relative to the axis, is carried out with the same face-bow in one process. CADIAX® *diagnostic* is a closed system. It is based on many years of scientific and practical experience and was conceived and developed for the everyday practice.

CADIAX® diagnostic measures translation and rotation. The high-precision electronics (16 bit ADC) work with an internal measurement resolution of 0.001mm. The system records practically any number of movements, up to a duration of 18 seconds per registration.

02-00G200	CADIAX® diagnostic  Electronic box including: 2 flags (large), 2 double-styli, foot switch, cables, carrying case, USB adapter, user manual	8.570,00	
04-GCR009	(prerequisite: condylograph; GDSW Version "AM")  Condylograph  Set consisting of: cranial and mandible bow; bite fork and support; Upper jaw transfer stand and supplementary parts for-transfer to Reference articulator  * mounting stand for Artex®, SAM®, Denar®, Hanau® on request	3.578,00	
04-GCR011	Condylograph comfort Set consisting of: cranial and mandible bow; bite fork and support; Upper jaw transfer stand and supplementary parts for transfer to Reference articulator  * mounting stand for Artex®, SAM®, Denar®, Hanau® on request	3.578,00	***



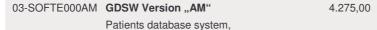


# 4/8 Recording – CADIAX®

#### Gamma Dental Software® (GDSW)

Gamma Dental Software® for Windows® is prerequisite for the CADIAX diagnostics application. GDSW offers a variety of analysis options, paired with a modern database system. (Details about GDSW can be found in the "Diagnostics/Software" chapter).

Prices for single user licenses!



Condylography module, CADIAX® analysis module, cephalometric analysis program (CADIAS) tooth status module, wax-up module (this software is not included in CADIAX® diagnostic 02-00G2001)



Compatible with Windows® XP, Vista 32 bit processrs, Windows® 7

CADIAX® diagnostic system

16.423,00

**02-GCR300AM**: consisting of : 02-00G200 + 04-GCR009 + 03-SOFTE000AM

**02-GCR400AM**: consisting of: 02-00G200 + 04-GCR011 + 03-SOFTE000AM

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Spare parts	accessories for CADIAX® diagnostic	
04-GCR010	Condylograph comfort face bow	1.177,00
06-230240	3D joint support Condylograph (not included in set 04-GCR009)	330,00
06-230245	3D joint support Condylograph <i>comfort</i> (not included in set 04-GCR010 + 04-GCR011)	330,00
06-230335	Occlusal tray clutch, large	68,20
06-230330	Occlusal tray clutch, small (standard)	68,20
06-230345	Functional occlusal clutches (5 pcs)	152,20
02-SP0027	Foot switch for CADIAX® diagnostic	181,10
04-000014	USB – Serial adapter	89,00
02-SP0044	Serial cable	20,80
02-SP0002M	Measuring stylus CADIAX® diagnostic	1.146,00
02-SP0107	CADIAX® diagnostic Stylus cable	53,60
02-SPGR01M	Measuring flag right, for CADIAX <sup>®</sup> diagnostic	726,00
02-SPGL01M	Measuring flag left, for CADIAX® diagnostic	726,00
02-SP0100- MSET	Measurement sensory system CADIAX® diagnostic with "M" magnet technology (2 flags, 2 styli, incl. case)	3.741,00
02-SP0100- MSETU	Measurement sensory system CADIAX® diagnostic with "M" magnet technology (2 flags, 2 styli, incl. case), on return of used flags/styli	2.421,00









# 4/9 Recording – CADIAX®

02-SP0010A	Upgrade CADIAX® diagnostic from CADIAX® III	4.928,00
02-SP0010	Upgrade CADIAX® diagnostic from CADIAX® III in exchange for old system	3.589,00
02-SP0010AF	Upgrade CADIAX® diagnostic from CADIAX® III, incl. flags	5.999,00
02-SP0010F	Upgrade CADIAX <sup>®</sup> <i>diagnostic</i> from CADIAX <sup>®</sup> III, incl. flags, in exchange for old system	4.928,00
02-SPE0037	User Manual for CADIAX® diagnostic	21,50
04-001015	RRzF instructional CD CADIAX® diagnostic	44,00



\*Prerequisite: GDSW Version 6.28.4.0 +Service Pack 3 or higher (price does not include Software-Update!)

"The Masticatory Organ": a fascinating book by Dr. R. Slavicek, full of experiences concerning the functions and dysfunctions of the masticatory organ. An important work, very helpful for understanding the possibilities of the GAMMA system.

Highly instructional, richly illustrated, with 543 pages.

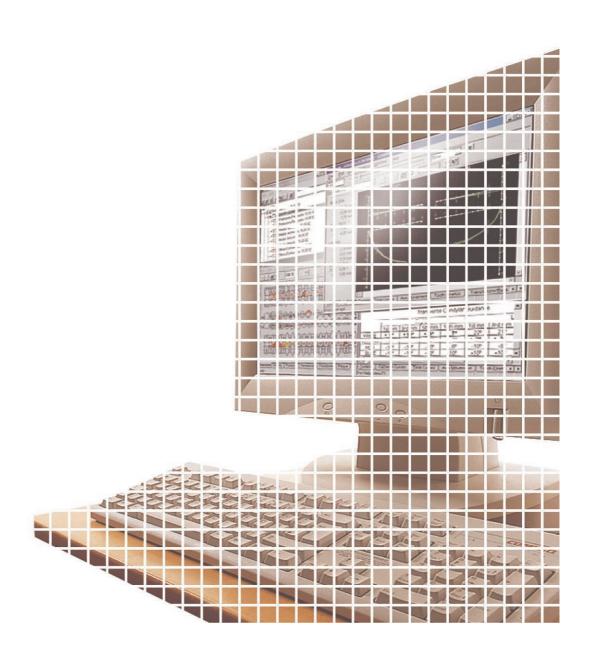
3-9501261-1-2 **Book "The Masticatory Organ"** 290,00 Prof. Dr. Rudolf Slavicek





# Notes:

# 5/1 Diagnostic & Software





# 5/2 Diagnostic & Software

#### Diagnostics with Gamma Dental Software®

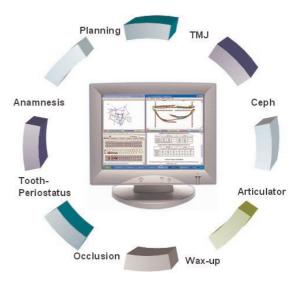
Diagnostics is the collection and evaluation of individual findings and other information with the goal of arriving at a diagnosis. A diagnostic system must be relevant to therapy and must meet the demands of running a modern dental practice. GAMMA provides a logically constructed system which makes the acquisition and administration of such information possible and fully supports the user in forming a diagnosis.

Gamma Dental Software<sup>®</sup> is a system built up of modules, which comprehensively cover the requirements of modern clinical- and instrumental functional diagnostics and functional therapy.

- Anamnesis findings
- Cephalometric diagnosis and planning
- TMJ diagnoses
- Articulator programming
- Wax-up
- Tooth and periodontal status

The close affiliation and compatibility to face-bows and articulators makes the software an ideal interdisciplinary communications medium during the practical course of therapy.





#### **GDSW** data management

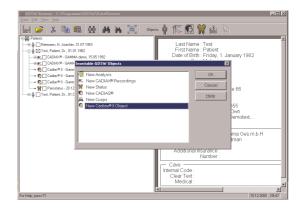
The Gamma Dental Software Data Manager is equipped with a modern Windows<sup>®</sup> database system.

The system administers patient data and allows you to specifically classify data, whereby you may include as much information as you wish. The system is also set up so that you can save any other documents you choose (e.g., photos, MS-Word documents) and assign them to an individual patient.

The contents of any selected data record are available for a quick scan, using the integrated **Pre-View Function**.

Naturally, the system has an open **interface** available for the most common practice administration systems and it supports the following programs: *Baumgartner*, *Dampsoft*, *Evident*, *Solutio*, *Lutz Hergestell*.

A fully integrated E-mail function allows you to send and receive GAMMA data, simplifying communication (e.g., between the dental practice and the lab), and eliminating the time-consuming printing of information.







# 5/3 Diagnostic & Software

#### **Modular structure**

The layout of Gamma Dental Software is modular and may be configured according to the needs of your practice and/or lab. This chapter describes some of the details of the individual modules.

## Gamma Document Browser

Gamma Document Browser is a comprehensive data base and documentation tool. In addition to the classical Gamma modules for diagnostics, it allows the inclusion of complete photo documentations as well as the extension of any existing documents, like text files, graphics and spreadsheets. The option for easy and direct presentation of data makes this program an excellent communications tool which is suitable equally for students, in the dental office, in study groups or in the dental lab.



#### **CADIAS®**

The central diagnosis- and planning module in Gamma Dental Software. The focal point is the cephalometric analysis, which can be combined with other data, such as Clinical Functional Analysis or CADIAX.



## CADIAX<sup>®</sup> Analyses

Processes registrations from CADIAX® compact 2 and CADIAX® diagnostics. Includes a variety of display options, as well as conversions for setting the articulator and wax-up technique.

Especially suitable for CADIAX® compact 2 users who want to take advantage of the full

potential of the system.

# CADIAX<sup>®</sup> Condylography

Set up on the CADIAX® Analysis module, to carry out condylograph registration with the

CADIAX® diagnostics system.



## Tooth- and periodontal status

Processes input from tooth status, plaque status, periodontal status, tooth mobility, tooth resilience and occlusal functions.



All versions of the software include the basic module Data Manager, incl. Tooth/Periodontal Status. The following module combinations are available:

	03-SOFTE000CC2	Recording software for CADIAX® compact 2	337,00*
Version "C"	03-SOFTE000C	CADIAX® Analyses	1.489,00*
		Database system with enhanced CADIAX® analyses	
Version "CW"	03-SOFTE000CW	Like version "C" with wax-up program	1.918,00*
Version "S"	03-SOFTE000S	Central diagnosis- and planning module, incl. cephalometric program	1.929,00*
Version "AM"	03-SOFTE000AM	All modules: CADIAX Analyses & Condylography, wax-up, incl. cephalometric analysis program	4.275,00*
	03-SOFTD000DB	GAMMA Document Browser base license	399,00

<sup>\*</sup>Price for single-user license.

System requirements: PC or Notebook with Pentium III processor or faster, operating system Microsoft Windows<sup>®</sup> XP, Vista<sup>®</sup> and 7, 500 MB free disc space, 512 MB RAM, Serial and USB interface.



# 5/4 Diagnostic & Software

#### CADIAX® Analyses

The CADIAX<sup>®</sup> Analyses module processes and stores data from both CADIAX<sup>®</sup> registration systems, CADIAX<sup>®</sup> compact and CADIAX<sup>®</sup> diagnostics.

The program includes a variety of display options, as well as conversions for setting the articulator and wax-up technique. In addition to detailed diagnostic analyses of mandibular movement, it allows for expanded articulator calculations, including the setting of individual anterior quidance units.

The software is especially suitable for CADIAX® compact users who want to take advantage of the full potential of the appliance. The high-resolution screen clearly displays all of the details from the condylography data.

The 3-dimensional displays of mandibular movement are clear and easily comprehensible for the patient. This is extremely helpful when explaining planned therapeutic measures to the layman (patient).

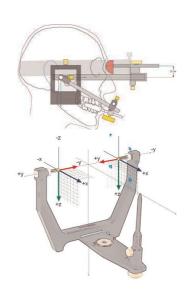


# Movement simulation through ex-centric articulator programming

Using the CADIAX $^{\otimes}$  compact face-bow and the CADIAX $^{\otimes}$  diagnostics system, the coordinate system, defined by the hinge axis point and anterior reference point, is transferred directly to the articulator.

So, the logical working procedure becomes a closed system. Through the mechanical connection between registration and the articulator, CADIAX provides a precise relation for maximum reproducibility.

The data acquired with the registration systems can then be used in the calculation programs for individual patient settings in the articulator.







All calculations are based on the manufacturer's geometry for the various articulators.

Calculations for sagittal protrusion inserts are made with the protrusion track on hand, by evaluation of the X/Z diagram.

Calculations for transverse inserts are made with the mediotrusive movements on hand, by evaluation of the X/Y diagram.



# 5/5 Diagnostic & Software

The mathematical adaptation of the given articulator characteristics is made according to the "best-fit" process. The articulator insert (blue) is turned until it coincides, as closely as possible, to the patient's registration (red). If the articulator includes various inserts, the program will search for the best fit.

CADIAX® always calculates values for 3, 5 and 10mm, always processing the total track progression from 0 (reference position) to the given value.

#### Compatibility

In addition to the perfectly suitable Reference SL



articulator, CADIAX users have several other articulator systems at their disposal, which are compatible with the software:

ARTEX<sup>®</sup>, DENAR<sup>®</sup>, HANAU<sup>®</sup>, IVOCLAR<sup>®</sup>, KAVO<sup>®</sup>, PANADENT<sup>®</sup>, SAM<sup>®</sup>, WHIPMIX<sup>®</sup>

# Right Left 3rd mm | 5th mm | 10th mm | 3rd mm | 5th mm | 10th mm | 32 | 37 | 41 | 14 | 26 | 34 | 0-3 mm | 0-5 mm | 0-10 mmm



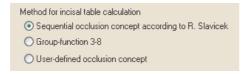
excursion movement

# Pre-calculated occlusal guidance for diagnostics and wax-up

The simulation in the articulator is determined by three adjustable guidance units: the two condylar joints and the adjustable incisal table. Posterior guidance is already given with the CADIAX registration.

Occlusion concepts and their implementation in wax-up are defined by means of the incisal table. By adjusting the guidance surfaces in the table, more or less rotation is brought into the movement, i.e., the inclinations of the guidance surfaces on the tooth are determined.

Gamma Dental Software<sup>®</sup> includes suggested pre-set concepts, as well as the possibility of implementing an individual, computer-generated occlusion concept.



**R.** Slavicek's natural concept of sequential occlusion is included as standard value in the software.







# 5/6 Diagnostic & Software

® SAM is a trademark of SAM Präzisionstechnik, Artex is a trademark Amann-Girrbach Dental, Denar & Hanau are trademarks of Whipmix, KaVo is a trademark of KaVo, Whipmix is a trademark of. Whipmix, Panadent is a trademark of Panadent, Ivoclar is a trademark of Ivoclar



For the sequential table, the calculations are based on the values of the joint guidance, in relationship with the spatial cusp coordinates, determined by statistical means.

For exact calculations, the cusp coordinates of the mandible are entered.
Gamma Dental Software then calculates an incisal table setting for each tooth, depending on the desired concept.

In addition, the program calculates an idealized radius of the curve of Spee and, depending upon the occlusion concept and cusp angles, an optimal inclination of the occlusal plane, according to functional parameters.

#### Gamma Sequence Incisal Table

Condylar Articulator values for Sequence Incisal Table calculation SCI right: 44° SCI left: 29° TCI right: WHITE / 0° TCI left: WHITE / 1°

Suggested sequence table setting Protrusion: BLUE Right lateral: BLUE Left lateral: BLUE

Calculated vertical cusp tip positions											
		Ri	ght		Left						
	TA	I - Table	T - S1	T - S2	TA	I - Table	T - S1	T - S2			
1	46,2°	46°	34°	54°	46,2°	45°	34°	54°			
2	46,2°	45°	34°	54°	46,2°	46°	34°	55°			
3	36,2°	46°			36,2°	50°					
4	23,8°	34°			23,8°	39°					
5	16,8°	25°			16,8°	30°					
6m	10,7°	15°	1		10,7°	19°	1				
6d	9,2°	5°	1		9,2°	8°	1				
7m			1								
7d			1				1				
8m			1				1				
8d			1				1				

cusp inclination	20⁰	25⁰	30º
balanced occlusion 1/6	15⁰	10⁰	5º
balanced occlusion 1/7	24⁰	19⁰	14º
canine guidance 1/6	6º	1º	-4º
canine guidance 1/7	15⁰	10⁰	5º

#### **TMJ** diagnostics

CADIAX® records the spatial movement of the hinge axis of both mandibular joints simultaneously, bilaterally and in elapsed time. Converted to the intercondylar distance, the system offers the possibility of using differential diagnostics for the static- and dynamic evaluation of the movement tracks.

The advantages of condylographic diagnostics are apparent:

- The method is non-invasive and carried out quickly
- The patients are not exposed to radiation
- The results are dynamically reproducible, independent of the therapist
- The examination can be carried out in the dental practice; the results are immediately available
- The ideal enhancement for interdisciplinary communication

Application of an individually adjustable mandible bow for setting the exact hinge axis is absolutely necessary in diagnostic condylography. When using the bow with CADIAX® compact, the hinge axis is manually adjusted before registration.

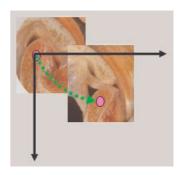
The foundation of diagnostics is the standardized orthopedic description of the mobility and motility of the TMJ, with the following parameters:

- Quantity
- Quality
- Characteristics
- Symmetry
- Timing (comparison between left and right TMJ)
- Speed phenomenon
- CPM
- Functions und para-function

The following movements will be evaluated: protrusion/retrusion, mediotrusion right and left, open/close, speech, bruxism, chewing.



Individueller, auf die Scharnierachse justierter Schreibbogen als Voraussetzung condylographischer Diagnostik





# 5/7 Diagnostic & Software

#### The principles of condylographic diagnostics

The first findings are purely descriptive. These are the basis for every other interpretation, and serve in the collection of diagnostic data.

Subsequent interpretation requires the differential diagnostic evaluation of the results with clinical- and instrumental functional analyses, because the condylography registrations can not be evaluated separately, but only in conjunction with the other findings of the cranio-mandibular system.

#### The "normal" joint

Condylography findings are based on the principle of comparative diagnostics with statistically obtained movement patterns of a "normal joint". The following illustrations display non-guided movements, without tooth contact and without utilization of a bearing device:

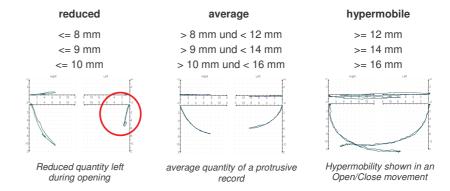
#### Quantity



Protrusion Mediotrusion Open/Close

Describes the maximum excursion distance of the translatory part of a movement track, measured from the reference position to the most excursive point of the movement. The quantity is described as *reduced*, *average* or *hypermobile*.

With Gamma Dental Software  $^{\circ}$ , this value can be read quickly and clearly, by clicking on the maximal excursive point in the CADIAX  $^{\circ}$  curves.

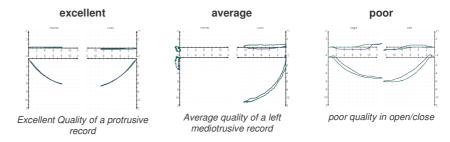


#### Quality



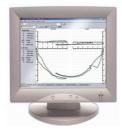
Normal registrations are reproducible, distorted and frictionless movements of synovial joints. Excursion- and incursion tracks practically overlap. The quality is described as *excellent*, *average* or *poor*.

With a variety of view and zoom options, Gamma Dental Software offers an ideal and vivid program for evaluating the quality of joint track recordings.



# 5/8 Diagnostic & Software

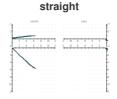
#### Characteristics



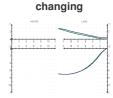
The characteristic is described as *concave*, *straight*, *convex* or *changing*. Normal tracks show an anterior concave characteristic.

# anterior concave

anterior concavity in the sagittal tracing for both sides



mediotrusion right shown with straight characteristics



left mediotrusion with changing characteristics from convex to concave)



Example of open/close and mediotrusion leftin an overlay display.

The differential diagnostics of joint track overlays have special importance in the evaluation of the characteristic. The illustration left shows the overlay of an open/close movement (blue), with a left mediotrusion track (green).

The steep and extremely shortened opening track does not lie over the distinctly longer mediotrusion. An indication of anterior disk displacement of the left joint, with possible partial reduction.

#### **Symmetry**



Right-left comparison of quantity, angularity, quality and characteristic of symmetrical registrations (protrusion/retrusion and open/close). In symmetrical movements, no noticeable transversal movements take place.

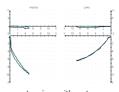
In the examination for symmetry, it has to be considered that the "symmetric" patient is not the norm. Thus, slight asymmetries are to be expected and considered "normal". The evaluation of symmetry can only be carried out for open/close and protrusion/retrusion.

The clearly comprehensible Gamma Dental Software displays allow for evaluation of functional symmetry according to graphic and numerical standards.

# symmetrical joint track

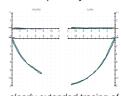
symmetrical joint track, protrusion

sagittal asymmetry of track inclination



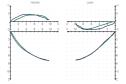
protrusion with extreme differences in inclination

sagittal asymmetry in quantity



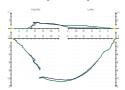
clearly extended tracing of left joint

transversal asymmetry



strong transversal asymmetry of a protrusion track, caused by occlusal interferences

sagittal and transversal asymmetry



extreme right-left differences in open/close

# 5/9 Diagnostic & Software

#### Timing and phenomena of speed



Dynamic evaluation of symmetric and asymmetric movements in translation and rotation.

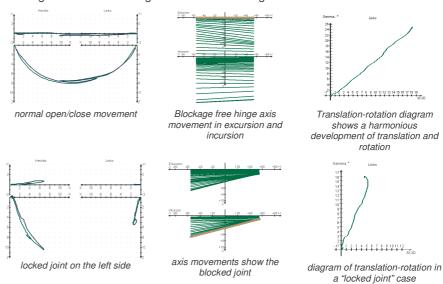
Observing speed phenomena of the sagittal, transversal and rotational components of hinge axis movement. Normal joint movements generally register speeds of less than 60 mm/sec.

Gamma Dental Software  $^{\text{@}}$  provides the possibility for evaluating elapsed time by means of the view aspects "Axis movements", "Translation-Rotation" and "Time curves".

# the "normal" tracing Axis movement seperated in ex- and incursion Time curves show the condylographic parameters drawn over the time axis symmetric joint track : the even hinge axis movement in excursion, and incursion, separated \*\*Time curves show the condylographic parameters drawn over the time axis \*\*Time curves show the condylographic parameters drawn over the time axis \*\*Time curves show the condylographic parameters drawn over the time axis \*\*Time curves show the condylographic parameters drawn over the time axis

#### The significance of the hinge axis rotation in diagnostics

Leftside reciprocal TMJ clicking



Blockage and acceleration visible

in the axis movements

exact localization of luxation.

usina time curves



# 5/10 Diagnostic & Software

#### Condylographic diagnostics including functional occlusion

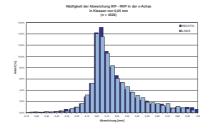
Prerequisite for these diagnostics: registrations carried out with the functional occlusal clutch

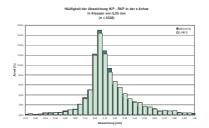
#### **CPM<sup>®</sup> Condylar Position Measuring Unit**



CPM measures the spatial difference between the reference position (centric) and a second mandible position (e.g., maximal ICP). The registrations are overlaid with a simple protrusion movement and evaluated.

The ICP (or closed bite position) normally lies on the reference position or slightly anterior, on the habitual protrusion track





With CPM you can measure the relation of the existent ICP to the joint, or make a post-reconstructive check of the new occlusion situation. For example, deviations in cranial direction during the measurement (compression) have diagnostic significance. These kinds of registrations are indications that the occlusion in the molar area is not bearing sufficient force.

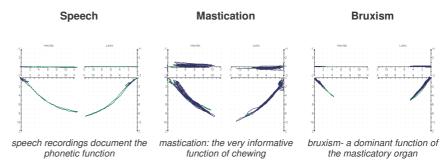
#### **Recording of functions**



The following functions of the masticatory organ can be documented and evaluated using condylar track registration:

mastication, speech, clenching and bruxism, swallowing.

The relation of any movements to the border movements of the TMJ can be viewed and evaluated.



<sup>&</sup>quot;The Masticatory Organ": a fascinating book by Prof. Dr. R. Slavicek, full of experiences concerning the functions and dysfunctions of the masticatory organ,.



An important work, very helpful for understanding the possibilities of the GAMMA system. Highly instructional, richly illustrated, with 543 pages.

3-9501261-1-2 Book "The Masticatory Organ" by Prof. Dr. Rudolf Slavicek 290,00





# 5/11 Diagnostic & Software

#### **CADIAS®**

CADIAS is the central diagnosis- and planning module of the Gamma Dental Software<sup>®</sup>.

The program links information from the far X-Ray program with the articulator, condylography, and other diagnostic findings.



# Cephalometric analysis - interdisciplinary diagnostics and planning

Cephalometric analyses are often wrongly considered to be relevant only for orthodontic diagnostics and treatment planning. However, these analyses are being accorded more and more significance in diagnostics and treatment strategies involved in comprehensive interdisciplinary dentistry. Considering the statistical distribution of skeletal classes in the overall population, it is evident that skeletal Class I is not the "norm", but rather, at only 37%, represents a clear minority. The majority of skeletal relations follow a Class II principle. Because of the considerable compensatory mechanisms involved during dento-facial development, most of these cases still achieve normal dentition, or a close facsimile. Nevertheless, after completion of development, this results in a large number of malocclusions and dysgnathias.

Therefore, when planning treatment for complex reconstructions, it is extremely important to analyze the relation in each individual case, before taking therapeutic action. This applies first of all to treatment of non-dysfunctional patients, but even more so for patients with dysfunction. All of these patients benefit from a systematic diagnostic procedure with standardized data-acquisition and evaluation, appropriate to the complexities of the stomatognathic system.

#### **CADIAS®** offers:

- Statistical analyses, based on individual standards, taking into consideration the functional compensation mechanisms
- Dynamic analyses by including the articulator's reference plane and therewith a link to clinicaland functional analysis (CADIAX<sup>®</sup>)
- Interactive case planning, with immediate feedback from all of the statistical and dynamic analyses

#### Point and contour input from the Ceph

Input is generally carried out directly on the computer screen. First, the X-Ray must be saved in the computer as a digital picture.

Alternatively, you can also use a conventional digitizer, which can communicate with the program through the standardized WinTab drive.

The program provides a list of points and contours, which should be entered one after another. Interactive help- and explanatory functions for the entries can be called up, if needed.

A Zoom window is permanently blended in to magnify the current cursor position and simplifies identification of points on the screen. Using standardized picture editing functions, you can modify important parameters, such as brightness, contrast, or magnification, adjusting them to your needs.





# 5/12 Diagnostic & Software

In general, the lateral X-Ray is created after the condylography. Before dismantling the bow (adjusted to the exact hinge axis), you must mark the position on the skin and make a small pencil-mark, so that the positions will be visible on the X-Ray. The anterior reference point (orbital) will be marked in the same way.







Further input in CADIAS<sup>®</sup>, which can be linked to the lateral X-Ray analysis:

- Frontal X-ray
- SMV X-ray
- Anterior guidance
- Condylography (CADIAX<sup>®</sup>)
- CPM (CADIAX<sup>®</sup>)
- Dental arch
- Diagnosis sheet, preliminary diagnostics

#### Frontal and SMV X-ray

These aspects are entered similarly to the lateral X-Rays, and extend the possibilities for analysis, especially with regard to symmetrical skeletal and dental aspects.

#### **Anterior guidance**

Input of the anterior guidance allows exact functional diagnostics of the incisors.

With the tooth shaper (06-231800), filled with hard silicone, an impression is made of the upper incisor, cut on the lingual concavity, and entered in the program.

#### Condylography

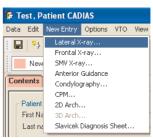
The appropriate protrusion tracings are selected from the list of CADIAX® condylography registration data and, using Copy/Paste, entered into the CADIAS® program.

#### **CPM**

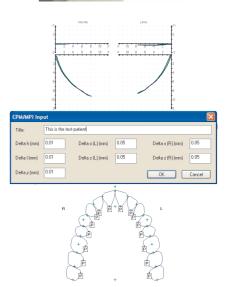
CPM is also input from CADIAX®, or by graphic registration, using an input form.

#### Tooth arch

To digitize the arch, the models are placed on a scanner, with occlusal surfaces facing down, and transferred as pictures to the computer.



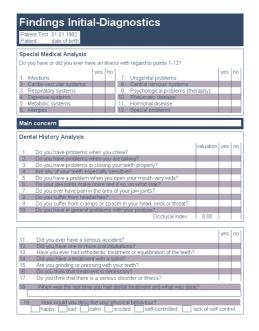






# 5/13 Diagnostic & Software

#### **Examination sheet-initial diagnostics**



Mus	cle Diagnosis				
			eft	ri	ght
		+	++	+	++
1.	shoulders and neck				
2.	atlanto-occipital region				
	M.temporalis ant.				
	M.temporalis med.				
3.c	M.temporalis post.				
4.a	M.masseter (superficial)				
4.b	M.masseter (deep)				
5.	Tuber maxillae				
6.					
7.	M.mylohyoideus				
8.	M.digastricus				
9.	suprahyoidale M.				
10.	infrahyoidale M.				
11.					
12.	M.sterno-cleido-mastoideus				
13.	M.omohyoideus				
14.	Tongue				
				+	++
15.	comparative palpation of jaw	ioir	nte		
10.	a) lateral poles, statically	jon	ILO		
	b) lateral poles, in rotation				
	c) retral joint space				
	d) Lig.temporo-mandibulare				
	a) Eig.terripero-manaibalare				l

Pre	Preliminary Brainstem Nerve Analysis						
1.	N.olfactorius (analysis)	П					
2.	N.opticus (analysis)						
3.	N.oculo-motorius (clinical mobility)	П					
4.	N.trochlearis (clinical mobility)						
5.	N.trigeminus (clinical palpation and sensitiveness)						
6.	N.abducens (clinical mobility)						
7.	N.facialis (clinical mobility)	Ш					
8.	N.stato-acusticus (clinical check of equilibrium and hearing)						
9.	N.glosso-pharyngeus (clinical and analysis)						
10.	N.vagus (analysis)						
11.	N.accessorius (clinical and analysis)						
12.	N.hypoglossus (clinical and analysis)						

This easily clearly arranged form is designed to cover all of the questions in dental anamnesis. The user can process the form with the mouse or fill out the fields with the keyboard.

The occlusal index is calculated automatically, based on the input information:

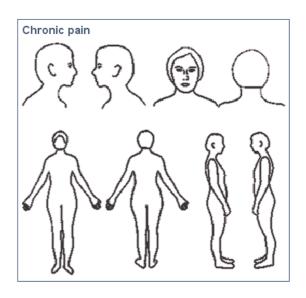
- The patient's main concern
- Special medical anamnesis
- Dental anamnesis
- Occlusal index

The occlusal index reflects the patient's own subjective feelings, regarding his/her complaints. A comparison of the subjective and objective situation is a key to evaluation.

Comparative muscle analysis is geared to an evaluation of the differences of the two sides. Palpation is carried out symmetrically, simultaneously and evenly while the patient is sitting comfortably. The patient indicates any differences between left and right, and indicates any possible pain in the palpated areas.

After the bilateral comparison, an evaluation of asymmetry can be made. This can offer insights into any possible disharmonious functional processes.

The examination sheet for chronic pain, tooth status and the possibility for including myofunctional problems, round out the program into a complete anamnesis package.





# 5/14 Diagnostic & Software

#### CADIAS® Analyses

Based on the input data, CADIAS provides a variety of static and dynamic analyses, which are generally offered as tracings and/or numerical lists from specific authors.

#### Norm calculations

Most of the standards used in CADIAS have been calculated according to the patient's age and gender. Values lying within the 1<sup>st</sup> standard deviation are displayed in green; values lying between the 1<sup>st</sup> and 2<sup>nd</sup> standard deviation are displayed in blue; values lying outside the 2<sup>nd</sup> standard deviation are displayed in red.



#### System- and user defined analyses

The program is equipped with a number of pre-defined points, values, numerical analyses and tracings. With all of these system settings, you will almost always find what you need.

However, if further individualization of the analyses is necessary, you can do this through the program, easily and without complications.

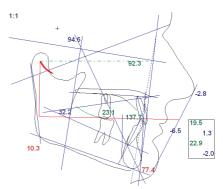
#### **Tracings**

The digitized X-Ray is displayed in tracings. The program shows the input contours, as well as the most important measuring planes and values.

The following author-specific tracings are included in the program's basic equipment:

- Slavicek
- Sato
- Ricketts
- Jarabak
- Sassouni
- Bergen
- Björg
- Steiner

In addition, it is possible to overlay a patient's scanned, lateral picture to the X-Ray tracing.









# 5/15 Diagnostic & Software

#### **Numeric Analyses**

These author-specific analyses give a list of values, which are generally sorted in chapters, thus offering a diagnostic overview, from a cephalometric point of view.

By simply clicking on any value, you will get an explanation of the value and the calculation of the trend.

Interactive Slav	vicek ver	bal anal	yses

In the Slavicek verbal analysis, values of individual problem groups are summarized and diagnostic statements formulated.

Click on any of these statements to arrive at an explanatory field, appearing under the list, which displays the determining- and interrelated values.

With this option, the program offers an excellent possibility for recognizing the interrelationships among individual values and for analyzing their evaluation.

#### **Graphical Analyses**

In the graphical analyses, various areas of analysis are displayed in spreadsheets:

Skeletal relation, Compensation, Occlusal plane, Maxilla, Mandible, Lower face height, Growth type, Skeletal profile, Maxillo-mandibular position.

#### Incisal pin table

This table allows the exact conversion of planned modifications of the vertical position in the articulator.

For example, with the index, modifications of cephalometric values planned in the VTO can be calculated to the height of the incisal pin. This means that you can exactly convert the planning on the X-Ray through the modified height of the articulator.

#### Overlay and comparison

Overlays and comparisons are useful in various areas. For instance, orthopedic or dental modifications directly planned on the screen can be displayed with overlays of the original situation.

Of course, comparisons of findings are also possible, before, between, during and after treatment.

Skeletal Measurement	Norm	Wert	Trend
Facial Axis	90.0°	88.1	
Facial Depth	89.8 °	81.6	2-**
Mandibular Plane	23.3 °	26.8	1D*
Facial Taper	68.0 °	71.6	1B*
Mandibular Arc	30.8 °	40.6	3B***
Maxillary Position	65.0°	62.2	1-*
Convexity	0.2 mm	3.6	1X*
Lower Facial Height (by R.Slavicek)	45.7°	44.2	
Lower Facial Height to Point D	52.2°	51.0	

extract of the skeletal measurement from the Slavicek analysis

#### The skeletal trend of the skull is dolichofacial

The skeletal trend of the mandible is extremely brachyfacial Skeletal class is II with tends to I

The maxilla is positioned neutral, with tendency to retrognathic

The mandible is positioned strongly retrognathic

The lower facial height is normal

Dental class unknown

The protrusion of the upper incisor is diminished

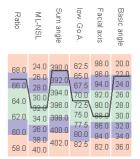
The inclination of the upper incisor is extremely diminished (6.9°!) The protrusion of the lower incisor is diminished

The inclination of the lower incisor is normal

The interincisal angle is increased

Occlusal concept: Canine dominan

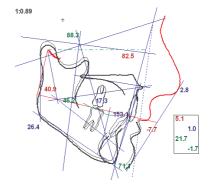
No functional statement available



graphic analysis for growth type

Incisal Pin Height	0.0	1.0	2.0	3.0	4.0	5.0	6.0	8.0	10.0	12.0	14.0	16.0	20.0
Lower Facial Height	44.2	44.6	45.0	45.5	45.9	46.3	46.7	47.5	48.2	49.0	49.7	50.4	51.7
LFH. (Norm)	45.7	45.8	45.9	46.1	46.2	46.3	46.4	46.6	46.8	47.0	47.2	47.4	47.8
LFH. (Variation)	-0.0	0.4	0.8	1.3	1.7	2.1	2.5	3.3	4.0	4.8	5.5	6.2	7.5
Menton Vertical	0.0	0.4	0.8	1.2	1.6	1.9	2.3	3.0	3.6	4.3	4.9	5.4	6.5
Pogonion Sagittal	0.0	-0.9	-1.8	-2.6	-3.5	-4.4	-5.3	-7.1	-8.9	-10.7	-12.5	-14.3	-17.9
Incision Inf. Vertical	0.0	0.5	1.1	1.6	2.1	2.6	3.1	4.0	5.0	5.9	6.7	7.6	9.2
Incision Inf. Sanittal	0.0	-0.6	-12	-18	-24	-3 N	.37	-49	-8.2	-7.5	-8.8	-10.2	-12.8

Incisal Pin Height	0.0	-1.0	-2.0	-3.0	-4.0	-5.0	-6.0	-8.0	-10.0	-12.0	-14.0	-16.0	-20.0
Lower Facial Height	44.2	43.7	43.3	42.8	42.3	41.9	41.4	40.4	39.3	38.2	37.1	35.9	33.4
LFH. (Norm)	45.7	45.6	45.5	45.4	45.3	45.2	45.1	44.9	44.7	44.4	44.2	44.0	43.5
LFH. (Variation)	-0.0	-0.5	-0.9	-1.4	-1.9	-2.3	-2.8	-3.8	-4.9	-6.0	-7.1	-8.3	-10.8
Menton Vertical	0.0	-0.4	-0.8	-1.3	-1.7	-2.2	-2.7	-3.7	-4.7	-5.8	-6.9	-8.2	-10.8
Pogonion Sagittal	0.0	0.9	1.7	2.6	3.5	4.3	5.2	6.9	8.6	10.2	11.8	13.4	16.4
Incision Inf. Vertical	0.0	-0.5	-1.1	-1.7	-2.2	-2.8	-3.4	-4.7	-5.9	-7.3	-8.6	-10.1	-13.1
Incision Inf. Sagittal	0.0	0.6	1.2	1.7	2.3	2.9	3.4	4.5	5.5	6.5	7.4	8.3	9.8



overlay: planned modification of mandible position with recalculated soft tissue profile



# 5/16 Diagnostic & Software

#### Diagnostic evaluations using lateral far X-ray

Providing optical displays of the skull, uncovering dynamic interrelationships and offering the possibility of recognizing compensatory processes, X-Ray diagnostics often set a decisive copurse to treatment planning. However, placing too much emphasis on only one or several points should be avoided. When used in connection with the other findings, X-Ray diagnostics can make a meaningful contribution towards the final diagnosis.

Basically, cephalograms are analyzed according to the following aspects:

- Skeletal evaluation
- Vertical evaluation
- Occlusal plane evaluation
- Dental analysis
- Aesthetic evaluation
- Dynamic analysis
- Compensation mechanisms
- VTO

#### Skeletal evaluation

Mandibula and maxilla are evaluated separately, as skeletal units. After this basic classification, the principle of the architecture will be reclassified to an appropriate subgroup of facial patterns, based on the values at hand.

A significant aspect of skeletal diagnostics involves the position of the jaw, relative to the reference structures of the skull, as well as the relative relation of the lower jaw to the upper jaw.

This individual preparation is so important, because all of the further analytical results can then be compared to the individualized values which correspond to the patient's skeletal pattern.

# 27.7 27.7 20. 27.7 20

the "uniform face" does not exist; the variations in skeletal relations are manifold

#### Vertical evaluation

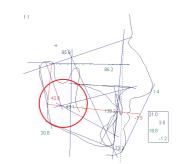
During growth, an individual distance develops between the upper and lower jaw: in individual cases, this vertical can be necessary as compensation for skeletal discrepancies. Therefore, this vertical assumes a special significance in diagnostics and treatment planning. This system classifies patients according to their skeletal principles. This is followed by the calculation of an individual vertical and a comparison with the current situation. This can supply valuable information for planning therapy. However, the "norm", as a principle of classification, should not be dogmatically set as the goal.

#### Dental analysis and occlusal plane evaluation

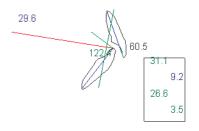
The anterior tooth situation and the occlusal plane, important for many functions, are decisive elements of the dental analysis.

Here, it is very important to take into consideration the morphology of the lingual functional surfaces of the anterior teeth.

First, the occlusal plane is evaluated statically. It is defined relative to the mandible and evaluated.



the individual lower face height as an important parameter for planning therapy



magnified display of the anterior tooth situation

# 5/17 Diagnostic & Software

#### **Aesthetic evaluation**

In the lateral X-Rays, the soft tissues are displayed well, using soft-filtering. This allows you to evaluate the facial aesthetics, and also to make a quality evaluation of the circumoral structures. The tooth position within and relative to the lip structures is important for diagnosis and planning. The position of the upper- and lower lips in the facial profile can be evaluated in relation to aesthetic planes of reference.

#### Dynamic analyses

A significant element of lateral X-Ray analysis is the dynamic examination of mandibular movement. This is achieved by transferring the recordings of hinge axis movement. With this supplement, it is possible to identify the functional determinants in their interrelationships and make a diagnostic evaluation.

The dynamic is defined through the relation of the sagittal condylar track inclination (SCI) to the occlusal plane and its inclination (OPI) as the *relative condylar track inclination* (RCI):

$$RCI = SCI - OPI$$

From this simple formula, an optimal inclination of the occlusal plane, adhering to functional aspects, can be planned easily, as a whole or for individual teeth.

#### Case planning with CADIAS® – VTO

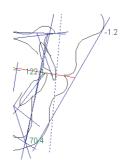
The program offers planning possibilities on the X-Ray display, which allow you to simulate important parameters and treatment steps on the computer screen. The following actions can be displayed:

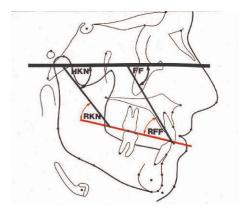
- Modification of the vertical situation
- Orthopedic tooth movements (rotation and shifting)
- Orthopedic TMJ movements of the maxilla and mandibula
- Surgical treatment simulation
- Soft tissue simulation
- Mandibular positioning, using condylography data (CADIAX<sup>®</sup>)

While using the application, you can make use of all static and dynamic analyses and call up a comparison of the planned situation with the original situation in index form or graphic.

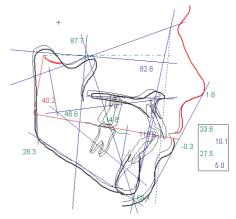
Using the incisal table chart, you can transfer various planned parameters back to the articulator.

You can save as many plans as you like for each case. The program notes every planning step simultaneously, so you can create a detailed planning list and/or retract every step.

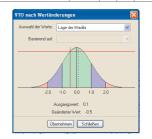




schematic illustration of relative condylar track inclination and relative anterior guidance



			_			
Skelettale Vermessung	Norm	Wert	Trend	Norm	Wert	Trend
Fazialachsenwinkel	90.0°	87.7		90.0°	88.1	
Fazialtiefe (Fazialebenewinkel)	88.4 °	82.6	1-*	88.4 °	82.2	2-**
Mandibularplanum (Unterkieferebenenw.)	24.5 °	28.3		24.5 °	27.5	
Kinnwinkel (Facial Taper)	68.0 °	69.1		68.0 °	70.4	
Collumwinkel (Unterkieferbogenwinkel)	27.5°	40.2	3B***	27.5°	43.2	3B***
Maxillare Position	65.0 °	65.0		65.0 °	61.4	1-*
Konvexität (Punkt A)	1.0 mm	1.8		1.0 mm	-1.2	1V*
Untergesichtshöhe (Slavicek Norm)	46.1 °	46.6		45.9 °	45.4	
Untergesichtshöhe zu D	52 8°	53.0		52.4°	51.8	





# 5/18 Diagnostic & Software

**The Masticatory Organ":** a fascinating book by Prof. Dr. R. Slavicek, full of experiences concerning the functions and dysfunctions of the masticatory organ,. An important work, very helpful for understanding the possibilities of the GAMMA system. Highly instructional, richly illustrated, with 543 pages.





Available in English language!

3-9501261-1-2 **Book "The Masticatory Organ"** Prof. Dr. Rudolf Slavicek

290,00

# 6/1 Service, Maintenance & Training





# 6/2 Service, Maintenance & Training

#### Service, maintenance and training

Over the last several years, we at GAMMA have continuously built up our service and advisory team. Not least, because we are convinced, that being constantly at our customers' service and permanently "on call" with customer support is the best way to ensure successful application of the GAMMA system. In practical terms, this means service- and customeroriented direction for proper application of our product. Above all, close contact to our customers also brings us important market feedback, which we use towards continuous product improvement and development.



Through our international contacts, we always stay informed about the latest developments in the "functional" business, just as we ourselves make constant efforts to improve our systems and encourage innovation.

#### **Customer service means:**

- Direct contact to the customer
- · Well-trained consultants for medical products
- Visits to the practice (throughout the German-speaking area)
- On site product introduction and service (Germany/Austria only)
- · Advanced training sessions
- Close partnership with renowned Institutes and Universities
- Road Shows
- · Participation at exhibitions

The GAMMA CADIAX® systems are medical measurement appliances of Product Class I. Legal regulations make it obligatory that our customers have these appliances checked at regular intervals for electrical safety and measurement function.

We regard it as our duty to offer this service to our customers on site. Our technicians are at your service for appointments.



05-001J	Adjustment for Reference SL articulator (device must be sent to the factory in Klosterneuburg – price excl. transport costs)	135,00
05-001	Annual CADIAX® on-site service, Germany/ Austria only (excl. expenses - see 05-001F), check flags/styli, function control, test printouts, adjustment of devices	186,00
05-002	Annual CADIAX® service – as 05-001002, but device to be sent to the factory in Klosterneuburg (price excluding transport costs)	115,00
05-001S	Installation and service - per hour, excluding expenses 05-001F	107,00
05-001T	Individual practical on-site training - excluding expenses 05-001F	153,00
05-001F	Staff and travel expenses by car for each km	1,20



# 6/3 Service, Maintenance & Training

#### Software maintenance

It is our duty to ensure that, with the Gamma Dental Software<sup>®</sup>, our customers receive a functionally reliable system at their disposal. We work constantly at improving and further developing the software, and creating new modules and functions.

Most GAMMA users appreciate to have regular supervision in product application as well as periodical training sessions, so that new staff has no problems in handling the software.



In addition to the normal telephone **Hotline**, we have a special service: **Software support online**. With this system, our software technicians can have direct access to the customer's computer. The customer can follow each of the technician's manipulations directly on the computer screen. This not only solves the software- or configuration problem quickly and easily, but also serves as an individual training session!

To take advantage of this service, you only need a standard DSL Internet access. Our technicians will then give you all further details. The connection set-up only takes a few minutes.

Immediately after concluding a software maintenance contract, the following company services are automatically at your disposal:

- Telephone information (or information via Fax or Email) for questions concerning the software.
- Information about update releases and announcements regarding new program versions, containing details of performance range
- Telephone information (or via fax, e-mail) about the usage of the program
- Telephone information about program interfaces of the software, in order to link individual modules of the software with other programs.
- Availability of the latest program version; this version will be sent on CD-ROM, including all of the corresponding documentation. The end user is responsible for setting up and running the new updates on the computer
- Free online software maintenance

Naturally, we cannot provide all of these services at no cost. Therefore, we offer a system calculated on the modules, that represents the graded maintenance costs, according to the software version being used:

Software mair	Software maintenance for Gamma Dental Software®						
05-00E00C	Version "C"	31,00					
05-00E0CW	Version "CW"	36,20					
05-00E00S	Version "S"	47,65					
05-00E0AM	Version "AM"	77,40					





# 6/4 Service, Maintenance & Training

#### CDs FOR INSTRUCTION & PRACTICAL USE: 199,00 Multimedia course Wax-Up DVD "Class I Occlusion" Prof. Slavicek and team ISBN 978-3-9501261-3-6 04-000021 150,00 Multimedia course Wax-up DVD "Class II, III, Cross Bite", Prof. Slavicek and team ISBN 978-3-9501261-4-3 04-000018 169,00 Wax-Up base models (upper/lower) for Multimedia Wax-Up Course (please inquire for availability) For Reference SL mounting, incl. distance blocks and mounting plates, pinned lower dental cast



#### **Training and further education**

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Training and further education are important factors in successfully integrating a functional dentistry.

RRzF instruction CD\*, "Reference SL"

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RRzF instruction CD\*, "CADIAX® compact 2"

RRzF instruction CD\*, "CADIAX® diagnostic"

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### ORDER FORM



to: GAMMA Medizinisch-wissenschaftliche Fortbildungs-GmbH

Josef Brenner Strasse 10 3400 Klosterneuburg - Österreich Tel.: +43 (0)2243 34140-0 Fax.: +43 (0)2243 34140-90

Email: office@gammadental.com VAT-ID-No.: ATU37002505

Custom	er:		Customer-No.:							
			VAT-ID-No.:							
Pos	Article-No.	Product description		Quantity	Price (EUR)					
Desired	delivery date:			TOTAL						
				plus shipr	statutory tax and ment					
				price	ss otherwise stated, s for installation and ng are not included					
Notes:										
This is a I conditions on our hom right to reje	egally effective cor are part of this contr pepage (www.gamm ct the order within a	ntract between you as customer and Coract and are explicitly accepted by the coadental.com) or ask for the terms at any period of 30 days after the order form w	GAMMA Medizinisch-wissenschaftliche Fortbild ustomer. You can find the general terms and c y time in our office. Gamma Medizinisch-wisser vas signed.	dungs-GmbH. The onditions listed on the onschaftliche Fortbild	valid general terms and he back-side of this form, ungs-GmbH reserves the					
For GAMM	A Date/Signature		For the customer Date/S	ignature						

#### General business conditions of GAMMA Medizinisch-wissenschaftliche Fortbildungs-GmbH (GAMMA) Josef-Brenner Strasse 10, A-3400 Klosterneuburg – AUSTRIA

7.3

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11

In principle, the contractual parties undertake to display mutual loyalty. GAMMA requires that its co-workers comply with the provisions of the data protection laws.

If any individual conditions of this contract are, or should become void or inoperative, this will not affect the remaining contents of this contract. The parties will work together as partners towards an arrangement which approaches the sense of the inoperative provision as nearly as possible.

#### Tending an offer and conferring of contract

- 1.1 A contract is effected exclusively by means of written confirmation or upon delivery of goods by GAMMA.
- 1.2
  - Collateral agreements, changes and amendments of this contract require the written confirmation of the contractual partners in order to be valid. The same applies for any guarantees regarding features, as well as for any waivers regarding the requirement for written confirmation.

    Quotations are, in principle, subject to change without prior notice.
- 1.3

#### Terms of payment, prices, taxes and charges

- Prices are valid ex-warehouse Klosterneuburg, Austria, exclusive of all incidental costs as well as of the statutory Value Added Tax and, unless specifically noted otherwise, are given in Euros. Prices are valid only for the
- In case of failure to meet the term of payment, the client is obliged to pay the 2.2 customary bank interest charges on the buying price

#### Right of detention, compensation, cession

- The client may not refuse to meet his/her obligations on the basis of any possible counter-claims, nor may the client withhold payment or make pretension to compensation for costs that may be incurred, unless the 3.1 grounds and the extent of these claims are undisputed by GAMMA, or are legally established and binding.
- Cession of a client's claims against GAMMA is only possible with the express permission of same. 32

#### Delivery date, Term of delivery

- The delivery date begins when the client receives the confirmation of order from GAMMA.
- The term of delivery is complied with if, before its expiry, the product has left the GAMMA warehouse in Klosterneuburg, Austria (shipping date or postmark), or when written notice is given that the product is ready to be 4.2
- The term of delivery will be extended as necessary in cases of labor disputes, in particular strikes and lock-outs, or in case of unforeseen hindrances, which are beyond the control of GAMMA, insofar as these hindrances can be demonstrated to have a considerable influence on the 4.3 production or delivery of the product. This also applies to the sub-contractor, if such problems should materialize. Even if the aforementioned circumstances occur at a time when there is already a delay, no claims may be made on GAMMA. Any agreed-upon contractual penalty is invalid unde
- these circumstances. The prerequisite for compliance with the term of delivery is that the client fulfills all contractual obligations. 4.4

#### 5 Devolution of risk and receipt (of goods), compulsory

- inspection and compulsory complaint, acceptance
  Risk is transferred to the client, at the latest, with the dispatch of the 5 1 Hisk is transferred to the client, at the latest, with the dispatch of the shipment, even in the case of a part-delivery, or when GAMMA has undertaken to perform other services. Redeliveries are carried out at the risk of the client. Part-deliveries are permissible, § 8.1 takes priority.
- 5.3
  - If the client is a qualified merchant, he/she is required to inspect the goods If the client is a qualified merchant, he/she is required to inspect the goods immediately and to inform GAMMA, in writing, within 10 days at the latest, of any substantiated defects or deficiencies, i.e., wrong goods or wrong quantities. After the expiration of this term, the product is considered to be accepted. In cases of "hidden" defects, the client (qualified merchant) bears the burden of proof.
    In case of defects on deliveries, caused during transport, the carrier has to
- be informed immediately at time of takeover Acceptance can only be refused in case of considerable defects or 5.5
- deficiencies

#### 6.1

- GAMMA retains proprietary rights to the product until all of the obligations of the business transaction (including future business arrangements) have been settled (including all balance payments due from account current).
  - The client may only utilize the product in the normal course of business, and confers upon GAMMA the joint-ownership of any new product resulting from the connection or combination of the GAMMA product with any other products. Upon disposal (sale), the client will transfer to GAMMA, in advance, for security reasons, the sum of the invoiced amount of its purchase price, in accordance with the joint-ownership agreement. The transfer will be accepted by GAMMA. In case of breach of contract on the part of the client, especially in cases of default of payment, GAMMA has the right to reclaim the product(s), after a default reminder, and the client is obliged to return the product(s).

#### Liability for wrong goods and/or wrong quantities 7.1

In principle, GAMMA is liable for damages, insofar as gross negligence or intent can be demonstrated on its part, within the scope of legal provisions. Liability for simple negligence is precluded. As far as legally allowed, compensation is precluded, in any case, for consequential damages and property damages, non-attained savings, loss of interest fees, and damages from claims of a third party against GAMMA. GAMMA assumes liability for rom claims or a third party against GAMMA. GAMMA assumes liability for defects and/or deficiencies in the shipment, including the absence of features which are explicitly guaranteed, to the exclusion of further claims, notwithstanding § 8, as follows, if the shipment is not considered to be accepted, in accordance with § 5.3: all of these parts are to be repaired, free of charge, or replaced with new ones, if they display defects and/or deficiencies which can be attributed to GAMMA, within 2 years of delivery on movable parts, within 3 years of delivery for non-movable parts, and if GAMMA has received written notification of these defects and/or

deficiencies. All replacements remain the property of GAMMA.

After a written complaint to GAMMA AG of wrong goods and/or wrong quantities, the client is obliged to allow GAMMA the opportunity to carry out any and all repairs and/or shipments of replacements, which it may deem necessary, according to its judgment and responsibility; otherwise, GAMMA is free from any liability. Only in extreme circumstances, involving a threat to the operational security and to prevent excessive or disproportionately greater damage, whereby GAMMA must be informed immediately, or if GAMMA is delayed in repairing a defect, does the client have the right to repair a defect himself/herself, or to have a defect repaired by a third party. In this case, the client may demand reimbursement from GAMMA, for the ary costs incurred.

GAMMA assumes the immediate costs for the repairs and/or delivery of replacements- insofar as the complaint proves to be valid- the costs of the replacement items, including shipment charges, and reasonable costs for dismounting and installation; further, according to individual circumstances, the costs which may actually be necessary for engaging assemblers and

assistants. Any other costs are borne by the client.
The term of liability for the replacement is 3 months, but this term must reterm of ilability for the replacement is 3 months, but this term must extend to at least the expiry date of the original shipment's term of liability. The term of liability for wrong goods and/or wrong quantities will be extended for the amount of time of interrupted operation, necessitated by the repairs. GAMMA bears no liability for the consequences of any possible inappropriate alterations or repair work, carried out by the client or a third party, without previous, express authorization from GAMMA.

#### The client's right of rescission and other liability of GAMMA

The client can rescind the contract, if it is clearly impossible for GAMMA to provide complete service, prior to the devolution of risk. The same is true for incapability on the part of GAMMA. The client can also rescind the contract if, after placing an order for products of the same type, it is finally impossible in, after placing an order for products or the same type, it is liminal impossible for GAMMA to deliver the required number of part of the shipment, and the client has a legitimate interest in refusing part-delivery; if this is not the case, the client may proportionately reduce the amount of his/her obligation. If this impossibility arises during an already existent delay in acceptance or through the encumbrance of debt on the part of the client, the client remains under the obligation to pay.
The client has the right of rescission, if GAMMA, in the absence of mitigating

circumstances, allows the expiration of two appropriately set term-extensions for repairs or the delivery of replacements, relative to wrong goods or wrong quantities attributable to GAMMA, in accordance with the conditions of delivery. The client is obliged to allow two attempts at repairs. The client's right of rescission is also valid in other instances involving two unsuccessful attempts at repair or delivery of replacements on the part of GAMMA. All further client claims are precluded, especially regarding conversion price-reductions and compensation for damages of any kind, including those damages not arising on the product itself. This preclusion of liability is not valid in cases of malicious intent or gross negligence on the part of the proprietor or managerial employee, or in those cases in which liability for defects and/or deficiencies in the product is assumed for personal injury and material damages on units in private use. This preclusion also does not apply to missing features, which are explicitly guaranteed, if the express purpose of said guarantee is to protect the user against damages, not arising on the product itself.

#### Copyright protection

Copyright protection
Designs, models, software, tools, programs, documentations and the like, from GAMMA, are the intellectual property of GAMMA and, although no specific protection exists, they may not be copied by the client or used in any way for reproduction, nor may they be ceded to a third party, neither free of charge nor for remuneration, nor used in any manner other than within the scope of the conditions agreed upon by GAMMA and the client.

In the case of orders, according to the client's own specifications (drawings, designs, etc.) the client assumes liability. In this way, the patent rights will set to infringed upon not be infringed upon.

#### Installation

If installation of the product is agreed upon in writing, GAMMA will install the product for the client, in a state of operational readiness. The following constitute the prerequisites for installation:
a. the client has, and makes available, an appropriate location for

- the apparatus, including all of the proper connections (water electricity, etc.)
- the apparatus may not have been altered by the client before

installation.

The installed product is considered to be in operational readiness after being subjected successfully to the GAMMA functional testing process, and witnessed to by the client's counter-signature on the certificate of acceptance. If the client does not sign the certificate of acceptance, despite a successful functional test, GAMMA will instruct the client as to the consequences of exceeding the acceptance deadline and will offer an extension of at least two weeks: if the client does not offer an explanation before expiry of this extended term, operational readiness is assumed as

certified nevertheless, with the date of the functional test.

If, after delivery, the agreed-upon installation of the product cannot be effected by GAMMA, for reasons attributable to the client, GAMMA AG will instruct the client as to the consequences of exceeding the deadline and offer the client a deadline of 30 days; if the installation has still not been carried out upon expiry of this term, also for reasons attributable to the client, operational readiness is considered as certified from the date of delivery. GAMMA assumes no obligations for connecting the product to any apparatus or appliance belonging to the client, which has not been supplied by GAMMA.

#### Concluding stipulations

Unless otherwise agreed to, the applicable legal provisions in effect between qualified merchants are exclusively according to Austrian law, also when the contract is carried out in another country. The territorial jurisdiction of the relevant court for the registered seat of the GAMMA is the exclusive authority, in case of possible disputes and/or litigation. The above-mentioned conditions are applicable to consumer sales, within the intent of the consumer protection laws, only insofar as the consumer protection laws do not specifically make other provisions.

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### ORDER FORM



to: GAMMA Medizinisch-wissenschaftliche Fortbildungs-GmbH

Josef Brenner Strasse 10 3400 Klosterneuburg - Österreich Tel.: +43 (0)2243 34140-0 Fax.: +43 (0)2243 34140-90

Email: office@gammadental.com VAT-ID-No.: ATU37002505

Customer:			Customer-No.:					
			VAT-ID-No.:					
Pos	Article-No.	Product description		Quantity	Price (EUR)			
Desired delivery date:			TOTAL					
				plus shipr	statutory tax and ment			
				price	ss otherwise stated, s for installation and ing are not included			
Notes:								
This is a I conditions on our hom right to reje	egally effective con are part of this contr nepage ( <u>www.gamm</u> ct the order within a	tract between you as customer and GA act and are explicitly accepted by the custadental.com) or ask for the terms at any tiperiod of 30 days after the order form was	MMA Medizinisch-wissenschaftliche Fortbildu tomer. You can find the general terms and co ime in our office. Gamma Medizinisch-wissens s signed.	ungs-GmbH. The nditions listed on t schaftliche Fortbild	valid general terms and he back-side of this form, ungs-GmbH reserves the			
For GAMM	A Date/Signature		For the customer Date/Sig	ınature				

#### General business conditions of GAMMA Medizinisch-wissenschaftliche Fortbildungs-GmbH (GAMMA) Josef-Brenner Strasse 10, A-3400 Klosterneuburg – AUSTRIA

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In principle, the contractual parties undertake to display mutual loyalty. GAMMA requires that its co-workers comply with the provisions of the data protection laws.

If any individual conditions of this contract are, or should become void or inoperative, this will not affect the remaining contents of this contract. The parties will work together as partners towards an arrangement which approaches the sense of the inoperative provision as nearly as possible.

#### Tending an offer and conferring of contract

- 1.1 A contract is effected exclusively by means of written confirmation or upon delivery of goods by GAMMA.
- 1.2
  - Collateral agreements, changes and amendments of this contract require the written confirmation of the contractual partners in order to be valid. The same applies for any guarantees regarding features, as well as for any waivers regarding the requirement for written confirmation.

    Quotations are, in principle, subject to change without prior notice.
- 1.3

#### Terms of payment, prices, taxes and charges

- Prices are valid ex-warehouse Klosterneuburg, Austria, exclusive of all incidental costs as well as of the statutory Value Added Tax and, unless specifically noted otherwise, are given in Euros. Prices are valid only for the
- In case of failure to meet the term of payment, the client is obliged to pay the 2.2 customary bank interest charges on the buying price

#### Right of detention, compensation, cession

- The client may not refuse to meet his/her obligations on the basis of any possible counter-claims, nor may the client withhold payment or make pretension to compensation for costs that may be incurred, unless the 3.1 grounds and the extent of these claims are undisputed by GAMMA, or are legally established and binding.
- Cession of a client's claims against GAMMA is only possible with the express permission of same. 32

#### Delivery date, Term of delivery

- The delivery date begins when the client receives the confirmation of order from GAMMA.
- The term of delivery is complied with if, before its expiry, the product has left the GAMMA warehouse in Klosterneuburg, Austria (shipping date or postmark), or when written notice is given that the product is ready to be 4.2
- The term of delivery will be extended as necessary in cases of labor disputes, in particular strikes and lock-outs, or in case of unforeseen hindrances, which are beyond the control of GAMMA, insofar as these hindrances can be demonstrated to have a considerable influence on the 4.3 production or delivery of the product. This also applies to the sub-contractor, if such problems should materialize. Even if the aforementioned circumstances occur at a time when there is already a delay, no claims may be made on GAMMA. Any agreed-upon contractual penalty is invalid unde
- these circumstances. The prerequisite for compliance with the term of delivery is that the client fulfills all contractual obligations. 4.4

#### 5 Devolution of risk and receipt (of goods), compulsory

- inspection and compulsory complaint, acceptance
  Risk is transferred to the client, at the latest, with the dispatch of the 5 1 Hisk is transferred to the client, at the latest, with the dispatch of the shipment, even in the case of a part-delivery, or when GAMMA has undertaken to perform other services. Redeliveries are carried out at the risk of the client. Part-deliveries are permissible, § 8.1 takes priority.
- 5.3
  - If the client is a qualified merchant, he/she is required to inspect the goods If the client is a qualified merchant, he/she is required to inspect the goods immediately and to inform GAMMA, in writing, within 10 days at the latest, of any substantiated defects or deficiencies, i.e., wrong goods or wrong quantities. After the expiration of this term, the product is considered to be accepted. In cases of "hidden" defects, the client (qualified merchant) bears the burden of proof.
    In case of defects on deliveries, caused during transport, the carrier has to
- be informed immediately at time of takeover Acceptance can only be refused in case of considerable defects or 5.5
- deficiencies

#### 6.1

- GAMMA retains proprietary rights to the product until all of the obligations of the business transaction (including future business arrangements) have been settled (including all balance payments due from account current).
  - The client may only utilize the product in the normal course of business, and confers upon GAMMA the joint-ownership of any new product resulting from the connection or combination of the GAMMA product with any other products. Upon disposal (sale), the client will transfer to GAMMA, in advance, for security reasons, the sum of the invoiced amount of its purchase price, in accordance with the joint-ownership agreement. The transfer will be accepted by GAMMA. In case of breach of contract on the part of the client, especially in cases of default of payment, GAMMA has the right to reclaim the product(s), after a default reminder, and the client is obliged to return the product(s).

#### Liability for wrong goods and/or wrong quantities 7.1

In principle, GAMMA is liable for damages, insofar as gross negligence or intent can be demonstrated on its part, within the scope of legal provisions. Liability for simple negligence is precluded. As far as legally allowed, compensation is precluded, in any case, for consequential damages and property damages, non-attained savings, loss of interest fees, and damages from claims of a third party against GAMMA. GAMMA assumes liability for rom claims or a third party against GAMMA. GAMMA assumes liability for defects and/or deficiencies in the shipment, including the absence of features which are explicitly guaranteed, to the exclusion of further claims, notwithstanding § 8, as follows, if the shipment is not considered to be accepted, in accordance with § 5.3: all of these parts are to be repaired, free of charge, or replaced with new ones, if they display defects and/or deficiencies which can be attributed to GAMMA, within 2 years of delivery on movable parts, within 3 years of delivery for non-movable parts, and if GAMMA has received written notification of these defects and/or

deficiencies. All replacements remain the property of GAMMA.

After a written complaint to GAMMA AG of wrong goods and/or wrong quantities, the client is obliged to allow GAMMA the opportunity to carry out any and all repairs and/or shipments of replacements, which it may deem necessary, according to its judgment and responsibility; otherwise, GAMMA is free from any liability. Only in extreme circumstances, involving a threat to the operational security and to prevent excessive or disproportionately greater damage, whereby GAMMA must be informed immediately, or if GAMMA is delayed in repairing a defect, does the client have the right to repair a defect himself/herself, or to have a defect repaired by a third party. In this case, the client may demand reimbursement from GAMMA, for the ary costs incurred.

GAMMA assumes the immediate costs for the repairs and/or delivery of replacements- insofar as the complaint proves to be valid- the costs of the replacement items, including shipment charges, and reasonable costs for dismounting and installation; further, according to individual circumstances, the costs which may actually be necessary for engaging assemblers and

assistants. Any other costs are borne by the client.
The term of liability for the replacement is 3 months, but this term must reterm of ilability for the replacement is 3 months, but this term must extend to at least the expiry date of the original shipment's term of liability. The term of liability for wrong goods and/or wrong quantities will be extended for the amount of time of interrupted operation, necessitated by the repairs. GAMMA bears no liability for the consequences of any possible inappropriate alterations or repair work, carried out by the client or a third party, without previous, express authorization from GAMMA.

#### The client's right of rescission and other liability of GAMMA

The client can rescind the contract, if it is clearly impossible for GAMMA to provide complete service, prior to the devolution of risk. The same is true for incapability on the part of GAMMA. The client can also rescind the contract if, after placing an order for products of the same type, it is finally impossible in, after placing an order for products or the same type, it is liminal impossible for GAMMA to deliver the required number of part of the shipment, and the client has a legitimate interest in refusing part-delivery; if this is not the case, the client may proportionately reduce the amount of his/her obligation. If this impossibility arises during an already existent delay in acceptance or through the encumbrance of debt on the part of the client, the client remains under the obligation to pay.
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#### MAINTENANCE CONTRACT

for GAMMA Dental Software®											
	GDSW "A	M" □	GDSW "S		GDSW "CV appropriate version/opti		GDSW	"C"		GDB	
	s a contract between sany formed ur				A MEDIZINISCH-\ GAMMA)	WISSENSC	HAFTLICHE	FORTBIL	DUNG	S-GmbH,	
				Tern	ns of contrac	t					
	ontents of the conting operating				for the product GA	AMMA Dent	tal Software	, hereafter	name	d "software" for	
contra of the	act of $\square$ 12 mo	onths/  24 m Cancellation	nonths/ \( \simeg \) 36 m on special grou	onths and r	oncluded for an un nay be terminated eath, forced retirer e end user, comme	by either pa	arty, subject t alth reasons)	o 3 month is possib	's notic	ce, until the end	
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holida	ays). The call sh	ould be made	by the end user	or an author	th other programs: prized representation of sent on CD-ROI	ve.	•				
néw v	version replaces	the directly p	receding versior	with the sa	ame serial number updates on the co	r. All condition					
,	rovide free online nowledge level o			extra cost.	Any information giv	en does no	t make up fo	r user trair	ning, b	ut are based on	
4. Fe	es and conditio	ons of paymer	nt:								
GI GI GI GI Ad		per month	928,80 571,80 434,40 372,00 110,40	within 8 days, without deductions. These prices do not include sales to legally applicable taxes will be included in the bill. The maintenance correspond with changes in the consumer index of the Austrian Central							
5. Te		e customer is	obliged to use th	ne software	exclusively for his	own office.	Passing on	of software	e to thi	rd parties is not	
"AM")		becomes aut	omatically exte	nded and	license of the sof adjusted to the accordingly.						
					dments of this cor regarding the requ				ion of	the contractual	
8. Co		aser bears al	I costs, expense	es, taxes a	nd fees incurred,	relative to	the construc	tion and in	mplem	entation of this	
the re		onś. Any inval			are, or should bec d by such valid pr						
					ing written materi			erty of G	AMMA	and protected	
					governed by Aust subject-matter juri		e parties agr	ee that all	legal	disputes arising	
Liabil	ity for simple ne ding loss of sale	egligence is pr	recluded. In no	event shall	s gross negligence GAMMA be liable oss of interest fee:	e for any sp	ecial, incide	ntal or cor	nseque	ential damages.	
GAMMA Medizinisch-wissenschaftliche Fortbildun Josef Brenner Strasse 10 3400 Klosterneuburg Österreich				gs-GmbH							
					Name an	d address of the	e user				

Date and Signature

Date and Signature



Tel.: +43/2243/34140-0, www.gammmadental.com



# Notes:

